

**A REVIEW OF EPA'S REGULATORY ACTIVITY
DURING THE OBAMA ADMINISTRATION: EN-
ERGY AND INDUSTRIAL SECTORS**

HEARING
BEFORE THE
SUBCOMMITTEE ON ENERGY AND POWER
OF THE
COMMITTEE ON ENERGY AND
COMMERCE
HOUSE OF REPRESENTATIVES
ONE HUNDRED FOURTEENTH CONGRESS
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A REVIEW OF EPA'S REGULATORY ACTIVITY DURING THE OBAMA ADMINISTRATION: EN- ERGY AND INDUSTRIAL SECTORS

WEDNESDAY, JULY 6, 2016

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:02 a.m., in room 2322, Rayburn House Office Building, Hon. Ed Whitfield (chairman of the subcommittee) presiding.

Members present: Representatives Whitfield, Olson, Barton, Shimkus, Latta, Harper, McKinley, Kinzinger, Griffith, Johnson, Long, Flores, Mullin, Rush, McNerney, Tonko, Engel, Green, Castor, Welch, and Loebsack.

Staff present: Will Batson, Legislative Clerk, Energy and Power; Mike Bloomquist, Deputy Staff Director; Allison Busbee, Policy Coordinator, Energy and Power; Tom Hassenboehler, Chief Counsel, Energy and Power; A.T. Johnston, Senior Policy Advisor; Ben Lieberman, Counsel, Energy and Power; Brandon Mooney, Professional Staff Member, Energy and Power; Mary Neumayr, Senior Energy Counsel; Annelise Rickert, Legislative Associate; Dan Schneider, Press Secretary; Peter Spencer, Professional Staff Member, Oversight; Jean Fruci, Democratic Energy and Environment Policy Advisor; Caitlin Haberman, Democratic Professional Staff Member; Rick Kessler, Democratic Senior Advisor and Staff Director, Energy and Environment; John Marshall, Democratic Policy Coordinator; and Alexander Ratner, Democratic Policy Analyst.

Mr. WHITFIELD. I'd like to call the hearing to order this morning, and today's hearing is a review of EPA's regulatory activity during the Obama administration in the energy/industrial sector.

We'll have two panels of witnesses this morning. The first one, of course, is Ms. McCabe, who is a frequent visitor to the committee, and we welcome you again this morning, Ms. McCabe.

And then on our second panel I'll introduce each of those witnesses when it comes time for them to give their opening statement.

At this time, I would like to recognize myself for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. ED WHITFIELD, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF KENTUCKY

During the almost 6 years that I have been chairman of this subcommittee, we've had 40 hearings that have looked at various EPA rules and proposals that affect or will affect the Nation's energy and industrial sectors.

These are the critical sectors for ensuring our Nation's economic productivity and prosperity. The costs and burdens of EPA's unrelenting rulemaking upon these sectors have been a constant concern.

We've seen the impact of these rules in scores of shuttered coal-fired plants, the delayed and canceled projects, and the destruction of thousands of jobs in communities dependent upon this abundant energy resource.

But the impact of compliance costs is only part of the story. Our hearing record, which reflects testimony from Federal officials, State energy and environmental regulatory, legal experts and economists, shows EPA's controversial and extreme interpretations of its statutory authorities to transform its role from that of environmental regulator to that of the Nation's ultimate energy regulator.

In fact, on the climate change issues, the philosophy seems to be that the end justifies the means, whether or not laws are violated or not.

We see this first hand in the EPA's implementation of the administration's climate change agenda, which is reflected in what is already more than 100 greenhouse gas-related rules.

EPA's pursuit of greenhouse gas standards for the power sector is a case in point. The Agency's new interpretation of its authorities have led to a new source standard that effectively prohibits the construction of power plants in the United States that use the most advanced commercially proven clean coal technologies, the kind being built today in Japan and around the world.

In fact, Mr. Shimkus, Mr. Olson and I were in a plant in Japan last week. Zero NOx emission, zero SOx emission, operating, burning 3 million tons a year, cannot be built in America.

The prospect of this kind of regulation combined with utility MACT and related rules has undermined the diversification of our Nation's future energy supply. The Agency's assertion of new authorities to set energy policy is even more troubling with EPA's existing source rule.

The so-called Clean Power Plan would effectively place EPA in the driver's seat over the States and the Federal Energy Regulatory Commission in transforming how electricity is generated, transmitted and consumed in the United States, an influence over State electricity systems never contemplated by Congress when it adopted the Clean Air Act.

And given EPA's preferred reading of its authorities, there is only increased influence over energy policy to come. EPA is already setting greenhouse gas standards for new and existing oil and natural gas production.

We have to ask what will be the next EPA interpretation of its authority. The administration and EPA's Administrator admit the goal is to reduce massively the use of fossil fuels. That's the goal.

But that is not the purpose of the Clean Air Act. Congress did not write the Clean Air Act to be the vehicle for taking command of State energy planning, the efficient and economical dispatch of electricity or the production of oil and gas.

Congress did not write the Clean Air Act to provide EPA with the ability to create new regulatory powers and authorities so it can transform the Nation's energy system.

Yet, this is exactly what the Agency is doing. And I might add that Congress also rejected the idea of cap-and-trade once, yet EPA is pushing a back door cap-and-trade policy without congressional approval.

Under the Clean Power Plan, EPA has interpreted the Clean Air Act to give itself the power to plan the resource mix of the U.S. power sector.

EPA has created a de facto fuel and renewable energy standard for America. EPA and the administration are emerged and engaged in blatant favoritism.

For example, nuclear power plants receive no credit for their continued contribution to carbon emission abatement and wind energy by the Interior Department has been given a blanket exemption from the Federal Migratory Bird Act and the Eagle Protection Act.

And remember, BP was fined \$100 million under the Migratory Bird Act for the birds that were killed during the Gulf oil spill. So this administration is engaged in favoritism as it pursues its carbon future for America.

I look forward to the testimony of our witnesses today. I would remind everyone that 27 States filed a lawsuit against the Clean Power Plan, and the Supreme Court issued a stay.

And don't forget Larry Tribe, when he testified before this committee, the constitutional lawyer from Harvard, said the Clean Power Plan was like picking up the Constitution and tearing it up.

[The prepared statement of Mr. Whitfield follows:]

PREPARED STATEMENT OF HON. ED WHITFIELD

When the Obama administration took office in early 2009, Americans were struggling with the worst economic recession in a generation.

There is no question that today many Americans continue to struggle to make ends meet. And there's no question that during this time period, EPA has continued to promulgate thousands of pages of new regulatory requirements each year, with a number of major rules imposing annual compliance costs measured in the billions of dollars.

Current estimates put the total EPA's regulatory compliance burdens, based on the Agency's own numbers, at more than \$380 billion per year, or 2.1 percent of U.S. GDP. Heritage Foundation researchers added up EPA's own estimates and determined that annual costs to comply with EPA rules have grown by more than \$50 billion since 2009.

During my chairmanship, we have held 40 hearings that have looked at various EPA rules and proposals that affect—or will affect—the Nation's energy and industrial sectors. These are the critical sectors for ensuring our Nation's economic productivity and prosperity. The costs and burdens of EPA's unrelenting rulemaking upon these sectors have been a constant concern. We have seen the impacts of these rules in scores of shuttered coal power plants, the delayed and cancelled projects, and the destruction of thousands of jobs in communities dependent upon this abundant energy resource.

But the impact of compliance costs is only part of the story.

Our hearing record—which reflects testimony from Federal officials, State energy and environmental regulators, legal experts, and economists—shows EPA’s highly controversial and continuously evolving interpretations of its statutory authorities to transform its role from that of a traditional environmental regulator to that of the Nation’s ultimate energy regulator.

We see this firsthand in the EPA’s implementation of the administration’s climate change agenda, which is reflected in what is already more than 100 greenhouse gas related rules. EPA’s pursuit of greenhouse gas standards for the power sector is a case in point.

The Agency’s new interpretation of its authorities have led to new source standards that effectively prohibit the construction of power plants in the United States that use the most advanced, commercially proven clean coal technologies—the kind being built today in Japan and around the world. The prospect of this regulation, combined with Utility MACT and related rules, has undermined the diversification of our Nation’s future energy supply.

The Agency’s assertion of new authorities to set energy policy is even more troubling with EPA’s existing source rules. The so-called Clean Power Plan would effectively place the EPA in the driver seat over the States and the Federal Energy Regulatory Commission in transforming how electricity is generated, transmitted, and consumed in the United States—an influence over State electricity systems never contemplated by Congress in the Clean Air Act.

And given EPA’s preferred reading of its authorities, there is only increased influence over energy policy to come. EPA is already setting greenhouse gas standards for new and existing oil and natural gas production. We have to ask, what will be next under EPA’s interpretation of its authorities?

The administration and EPA’s Administrator admit the goal is to reduce massively the use of fossil fuels—but that is not the purpose of the Clean Air Act. Congress did not write the Clean Air Act to be the vehicle for taking command of State energy planning, the efficient and economical dispatch of electricity, or the production of oil and gas.

Congress did not write the Clean Air Act to provide EPA with the ability to create new regulatory powers and authorities so it can “transform” the Nation’s energy system. Yet, this Agency is pursuing these actions.

And I might add that Congress rejected the idea of cap-and-trade once, yet this EPA is pursuing a back door cap-and-trade policy without Congressional approval.

Fortunately, the Courts have checked EPA’s overreach in several recent decisions. The numerous legal infirmities of the Clean Power Plan have led to an unprecedented stay of those power sector rules by the Supreme Court, pending completion of judicial review.

This morning, we have two panels to discuss the regulatory issues and their practical impacts on States and the energy and industrial sectors. I’m pleased to welcome back Acting Assistant Administrator Janet McCabe, who will testify on EPA’s regulatory activity during this administration.

And I particularly look forward to our second panel, which will provide us the real world experience with the Agency’s rules on State energy and environmental regulation.

Ultimately, it will be up to Congress to ensure EPA stays in its statutory lane for environmental standard setting. It will also be up to Congress to take a holistic look at the statutes that govern our energy and electricity markets, and energy policy—to ensure our laws enable a growing, productive economy.

The hearing today will help further develop the record necessary to do this.

Mr. WHITFIELD. With that, at this time I’d like to recognize the gentleman from Chicago, Mr. Rush, for his opening statement.

OPENING STATEMENT OF HON. BOBBY L. RUSH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. RUSH. I want to thank you, Mr. Chairman.

Mr. Chairman, as the EPA under the Obama administration prepares the legally mandated regulations to protect the air, protect the land, and protect the water for all Americans, the majority party has insisted on digging its heels and fighting these rules at every turn.

Unfortunately, Mr. Chairman, it is impossible to address the most pressing issues associated with climate change if we simply

follow the example of the Republican Party of putting our collective heads deep, deep, deep in the sand and kicking this serious problem down the proverbial road for the next generation to tackle.

Mr. Chairman, all one has to do is to look at any number of articles that are written daily over the past 5 years alone to read about a thousand-year flood, read about the floods that wiping out parts of South Carolina and West Virginia even as we speak.

Mr. Chairman, pick up a daily newspaper, any daily newspaper from anywhere around the country at any time over the last year or 2, and you can read about the 100-year-old-drought-driven areas in the West.

Mr. Chairman, in fact it seems almost annually that we are witnessing drought-fueled wildfires incinerate millions of acres of forest at a record pace from Alaska to California, claiming the lives of firefighters, innocent people, destroying lives and devastating livelihoods.

Mr. Chairman, we understand that the Republican Party has never met a regulation that it did not want to kill. We get it. We get it, Mr. Chairman.

However, at some point, the majority party needs to stop simply trying to obstruct and follow the lead of President Obama, follow the lead of my allies around the world and indeed pretty much every other nation on this planet and heed the warning put forth by all of the world's scientists and Mother Earth, Mother Nature herself.

Mr. Chairman, it is not simply enough to rail against the EPA for establishing regulations protecting our most sacred natural resources of air, water, just because these rules are perceived to hurt the profit margin of certain industries.

Mr. Chairman, this is the United States of America and not the United States of Avarice. Mr. Chairman, there are other worthwhile benefits to society besides how much money a corporation earns in a single quarter.

In fact, Mr. Chairman, the Clean Air Act and the rules associated with it has been one of the most socially, environmentally and economically beneficial laws ever enacted by this Congress by anybody's standard, rather, period.

Time and time again, we've heard from our colleagues on the other side of the aisle that the EPA has overstepped its authority and is promulgating regulations that would hurt industry, kill jobs and bring about the downfall of the American way of life as we know it.

We've heard it time and time again. It's an old record. It's tired. That dog simply does not hunt anymore, Mr. Chairman. And yet, the benefits of the Clean Air Act programs have consistently outweighed the costs that we have been warned against at each and every time.

Mr. Chairman, you know as well as I, in a recent report to the Congress, the Office of Management and Budget found that in the average the 32 major rules promulgated by the EPA between 2004 and 2014 had benefits between \$160 billion and \$788 billion compared to costs of just \$38 billion to \$45 billion. By 2020, Mr. Chairman, the economic benefit of reducing air pollution is estimated at almost \$2 trillion, exceeding in cost by a 30 to 1 ratio.

So Mr. Chairman, my friend, instead of always crying wolf over the EPA rules, I would urge the majority party to work with those of us who want to address one of the world's most pressing challenges and help find new strategies to address the issue of climate change that impacts every man, woman and child in this country and around the world—those who are born and those who are yet to be born. With that, Mr. Chairman, I yield back the balance of my time.

Mr. WHITFIELD. The gentleman had no time left but you'll get a statement. But Mr. Upton is not going to be with us this morning. He's chairing another conference. And is there anyone on our side of the aisle that would like to make some comments? Mr. Shimkus, recognized for 5 minutes.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. SHIMKUS. And Mr. Chairman, just to welcome our guests. Also kind of raise the point that you raised that we did visit a supercritical clean power plant in Japan, the Isogo Thermal Power Station, and I think the takeaway from many of us was that when we talked to other countries that are involved in this debate they really create and incentivize and give emissions credits for more efficiencies and lowering CO₂.

I think our problem is is that we don't if there was a net benefit because of new technology and incentives. Our pathway still is using technology that's not available. There is technology that will make power plants more efficient.

This is a 1,200-megawatt two unit system and they broadly boast about the reduction in carbon emissions and they use that in their calculations and we don't see that coming from the administration.

And to my colleague and friend, Mr. Rush, all our question is where does the executive branch get its authority and we don't think the legislative branch should excuse the executive branch for any reason for illegally breaking the law by promulgating rules and regulations that are not founded in statutory authority.

That's part of our debate here today too. So we do welcome you. It will be an interesting hearing and I thank you and I yield.

Mr. WHITFIELD. Will the gentleman yield?

Mr. SHIMKUS. I will yield.

Mr. WHITFIELD. I might just point out I read this in one of the opening statements of one of our witnesses: Former Energy Secretary Steven Chu even criticized the Clean Power Plan this past month, arguing we should make a Clean Power Plan that's based on clean energy, not renewable energy. So even our former Secretary of Energy made that comment about the Clean Power Plan.

Mr. SHIMKUS. I yield back my time.

Mr. WHITFIELD. Gentleman yields back. At this time, is there anyone on—I see Mr. Pallone is not here. Do any of you all want to make any opening statements at this time?

OK. OK, that concludes the opening statements and we've already introduced Janet McCabe, who's the Acting Assistant Administrator of the Office of Air and Radiation, U.S. Environmental Protection Agency, a native of Indiana, and Ms. McCabe, we appreciate your being with us today and you're recognized for 5 minutes

for your opening statement, and then I'm sure there will be a few questions for you.

So thanks for being with us. You know the drill. The microphone, red light, and all that. So thank you.

STATEMENT OF JANET McCABE, ACTING ASSISTANT ADMINISTRATOR, OFFICE OF AIR AND RADIATION, ENVIRONMENTAL PROTECTION AGENCY

Ms. McCABE. Thank you, Chairman Whitfield and Ranking Member Rush, who had to step away and all the members of the subcommittee. Thank you so much for inviting me here to testify today on EPA's regulatory efforts under the Clean Air Act.

The mission of EPA is to protect public health and the environment and the Agency's regulatory efforts further those goals. We are guided in meeting those goals by science and by the law, which serve as the backbone for each of the Agency's actions.

For over four decades we have cut air pollution in this country by 70 percent and the economy has more than tripled. I will focus my opening statement on providing more detail for three rules, which will provide tremendous benefits to public health and the environment and they've mostly been mentioned already this morning—the Clean Power Plan, the methane standards for the oil and gas industry and the ozone national ambient air quality standards. Climate change is a tremendous environmental and public health challenge. The most vulnerable among us including children, older adults, people with heart or lung disease and people living in poverty may be most at risk from the impacts of climate change.

Fossil fuel-fired power plants are by far the largest stationary source of U.S. CO₂ emissions. Using authority under the Clean Air Act to address these emissions, the EPA finalized the Clean Power Plan last August.

Although the Clean Power Plan has been stayed by the Supreme Court, we are confident that it will be upheld because it rests on strong scientific and legal foundations.

Since the stay was issued, many States have been moving forward voluntarily to cut carbon pollution from power plants. They have also asked EPA to continue our outreach and development of supporting information and tools that will help guide States when the Clean Power Plan becomes effective which we're doing while ensuring that we fully comply with the stay. For example, we recently proposed design details for the optional Clean Energy Incentive Program to address State requests for additional clarification as States consider their options to reduce carbon pollution.

In May, EPA announced steps to further reduce methane and other harmful air pollutants from new and modified sources in the oil and gas industry along with the critical first step in tackling methane emissions from existing sources.

These steps will help combat climate change and reduce emissions of other harmful air pollutants. These standards build on the Agency's 2012 rules by adding requirements that the industry reduce emissions of greenhouse gases using readily available and cost effective technology and by covering hydraulically fractured oil wells along with additional equipment and activities that were not covered in the 2012 rules.

They also required owners and operators to find and repair leaks, which can be a significant source of emissions. These final standards reflect significant stakeholder input and in particular provide companies a pathway to demonstrate that requirements under a State rule are comparable to requirements in the final rule.

This would allow sources to comply with a specific final rule requirement by complying with a State regulation. We know that existing sources in the oil and gas sector also emit substantial amounts of methane and as a first step in the regulation of these sources we've issued a proposed information collection request, or ICR.

When finalized, it will require companies with existing operations to provide information on technologies and costs that are critical to the development of reasonable regulations. In addition, EPA plans to seek voluntary information on innovative strategies that can accurately and cost effectively locate, measure and mitigate methane emissions.

The draft ICR was published early in June and the first of two public comment periods will last for 60 days. Finally, in October of last year, the Agency completed the periodic review of the national ambient air quality standards, or NAAQS, for ground level ozone.

We have a primary standard directed at protecting public health and a secondary standard directed at protecting public welfare, for example, trees, plants and ecosystems.

Exposure to ground level ozone can harm the respiratory system, aggravate asthma and lung diseases and is linked to premature death. These health impacts impose significant costs on Americans and can adversely affect their daily lives through missed school and work.

The Clean Air Act requires EPA to review the NAAQS every 5 years to make sure the standards continue to protect public health with an adequate margin of safety.

Based on the law, a thorough review of the science, the recommendations of the Agency's independent science advisors, assessment of EPA experts and after extensive public engagement and opportunity to review and comment at many steps along the way, the Administrator determined that the appropriate level to protect the public health with an adequate margin of safety was 70 parts per billion.

The two-step process of a science-based NAAQS review followed by implementation is a system that works. EPA and State, local and tribal co-regulators share a long history of successfully managing and improving air quality.

For ozone, existing and proposed Federal measures like vehicle standards and power plant rules are reducing and will continue to further reduce ozone pollution nationwide.

We expect that the vast majority of counties outside of California will meet the 2015 ozone NAAQS by 2025 without having to take any additional action beyond those Federal measures.

Again, I thank the subcommittee for inviting me here today and I look forward to your questions and the discussion on these and other EPA actions.

[The prepared statement of Ms. McCabe follows:]

Written Statement of Janet McCabe
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
Before the
Subcommittee on Energy and Power
Committee on Energy and Commerce
U.S. House of Representatives
July 6, 2016

Chairman Whitfield, Ranking Member Rush and Members of the subcommittee, thank you for inviting me to testify today on EPA's regulatory efforts under the Clean Air Act. The mission of EPA is to protect public health and the environment, and the Agency's regulatory efforts further those goals. We are guided in meeting those goals by science and by the law which serve as the backbone for each of the Agency's actions. For over four decades, we have cut air pollution by 70 percent and the economy has more than tripled. I will focus my opening statement on providing more detail for three rules which will provide tremendous benefits to public health and the environment: Clean Power Plan, methane standards for the oil and gas industry, and the ozone National Ambient Air Quality Standards.

Climate change is a tremendous environmental and public health challenge. The most vulnerable among us – including children, older adults, people with heart or lung disease and people living in poverty – may be most at risk from the impacts of climate change. Fossil fuel-fired power plants are by far the largest stationary source of U.S. CO₂ emissions. Using authority under the Clean Air Act to address these emissions, EPA finalized the Clean Power Plan (CPP) on August 3, 2015. Although the Clean Power Plan has been stayed by the Supreme Court, we are confident it will be upheld because it rests on strong scientific and legal foundations.

Since the stay was issued, many states have been moving forward *voluntarily* to cut carbon pollution from power plants. They have also asked EPA to continue our outreach and development of supporting information and tools that will help guide states when the Clean

Power Plan becomes effective, which we are doing while ensuring that we fully comply with the stay. For example, we recently proposed design details for the optional Clean Energy Incentive Program to address state requests for additional clarification as states consider options to reduce carbon pollution.

In May, EPA announced steps to further reduce methane and other harmful air pollutants from new and modified sources in the oil and gas industry along with a critical first step in tackling methane emissions from existing sources. These steps will help combat climate change and reduce emissions of other harmful air pollutants.

These standards build on the agency's 2012 rules by adding requirements that the industry reduce emissions of greenhouse gases using readily available and cost-effective technology, and by covering hydraulically fractured oil wells along with additional equipment and activities that were not covered in the 2012 rules. They also require owners and operators to find and repair leaks, which can be a significant source of emissions.

These final standards reflect significant stakeholder input and, in particular, provide companies a pathway to demonstrate that requirements under a state rule are comparable to requirements in the final rule. This would allow sources to comply with a specific final rule requirement by complying with the state regulation.

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The Clean Air Act requires EPA to review the NAAQS every five years to make sure the standards continue to protect public health with an adequate margin of safety. Based on the law, a thorough review of the science, the recommendations of the agency's independent scientific advisors, and the assessment of EPA technical experts, and after extensive public engagement and opportunity for review and comment at many steps along the way, the Administrator determined that the appropriate level to protect the public with an adequate margin of safety is 70 parts per billion.

The two step process of a science-based NAAQS review followed by implementation is a system that works. EPA and state, local, and tribal co-regulators share a long history of successfully managing air quality. For ozone, existing and proposed federal measures like vehicle standards and power plant rules are reducing and will continue to further reduce ozone pollution nationwide. We expect that the vast majority of counties outside of California will meet the 2015 ozone NAAQS by 2025 without having to take additional action beyond federal measures.

I again thank the subcommittee for inviting me here today, and I look forward to your questions on these or other EPA air actions.

Mr. WHITFIELD. Ms. McCabe, thank you very much for your opening statement and I'll recognize myself for 5 minutes of questions.

When the Clean Power Plan was being discussed, one of the comments that was frequently made by any representative of EPA was that we were providing maximum flexibility to the States.

And yet, the reality is that in your so-called building blocks where States can go to natural gas or they can go to renewable energy they simply don't have that option. It's simply not there to the extent necessary.

So many critics say that that flexibility argument—we're giving maximum flexibility to the State—is really a red herring, that there is no flexibility for those States that have that unique problem facing them.

I mean, do you agree with that or do you just feel like oh, if you work hard enough you can—I mean, you all arbitrarily set the CO₂ standard for every State. So this flexibility argument you honestly believe that these States have the flexibility to meet this requirement?

Ms. MCCABE. I do, Mr. Chairman, and I can explain why.

First of all, I think it's important for me to say that the goal for each State was in fact not arbitrarily set. It was set after very careful evaluation of—

Mr. WHITFIELD. Who set it?

Ms. MCCABE. The EPA rulemaking sector.

Mr. WHITFIELD. Yes, EPA set it.

Ms. MCCABE. But not arbitrarily. It was based on information and data collected from the industry from States.

Mr. WHITFIELD. Well, some States would disagree with that. I've talked to many of them, and they view—even though you went through a process, that you set the standard.

Ms. MCCABE. Well, there's a difference between who set the standard and whether it was set arbitrarily. I was taking issue with the use of the word arbitrary, and the record lays out—people can disagree and certainly do disagree that we made the right choice or that we evaluated the data appropriately.

Mr. WHITFIELD. Why do you think the Supreme Court issued a stay of the Clean Power Plan?

Ms. MCCABE. Because this is a very important issue, and they felt that as courts have done before—

Mr. WHITFIELD. So you don't feel like that they had any questions on the legality of it, that they simply stated because it was such an important issue?

Ms. MCCABE. They gave no indication of their reasoning. No court has spoken to the substance—

Mr. WHITFIELD. But your interpretation is it was so important that they stayed it?

Ms. MCCABE. That's how I understand it. This is—

Mr. WHITFIELD. That's your understanding.

Ms. MCCABE [continuing]. Courts sometimes do stay regulations while they're going through review.

Mr. WHITFIELD. Uh-huh. Now, let me ask you this question. Despite the stay of the Clean Power Plan, last week EPA published

a 44-page proposed rule setting forth the details for Clean Energy Incentive Program and requesting comments by August 29th, 2016.

The purpose of the program is to incentivize early action by States to comply with the Clean Power Plan. Now, if a State or affected stakeholder does not comment on this proposed rule during the public comment period, will they have foregone their right to comment on the rule?

Ms. MCCABE. This is a completely voluntary program, and people are welcome to comment on it during the comment period.

Mr. WHITFIELD. Well, the rule is not final yet, is it? Or is the rule final yet? OK.

Ms. MCCABE. No, it isn't. It's proposed.

Mr. WHITFIELD. But you're saying that it's not going to be mandatory? It's going to be voluntary?

Ms. MCCABE. Absolutely not mandatory. It's an early action opportunity that's provided in the Clean Power Plan. It's not—

Mr. WHITFIELD. Will there be a final rule?

Ms. MCCABE. If the Agency finalizes it, it will—

Mr. WHITFIELD. And does the EPA plan to finalize the rule before the end of this administration?

Ms. MCCABE. I can't speak to the schedule. But I expect that the Agency will move to finalize the rule.

Mr. WHITFIELD. Now, if the EPA does finalize this rule, how would this comport with the stay?

Ms. MCCABE. We believe that this is not—taking this action is not inconsistent with the stay, and this may come up again this morning. We consult regularly with our lawyers at the Department of Justice.

The stay precludes EPA from implementing the Clean Power Plan. EPA is doing nothing to implement the Clean Power Plan.

Mr. WHITFIELD. Now, do you think there is universal agreement to what you just said, or do you think there are opposing views to what you just said?

Ms. MCCABE. I wouldn't want to speak for other people. There are usually a variety of views on everything that EPA does.

Mr. WHITFIELD. So that's EPA's view, right?

Ms. MCCABE. It's the EPA's view. It's the Department of Justice's view, and we are being very, very careful about this, Mr. Chairman.

Mr. WHITFIELD. OK. Because I remember you all making very strong comments that you had every faith and confidence that a stay would not be issued by the Supreme Court.

Ms. MCCABE. We did believe that to be true. I think many people believed that to be true.

Mr. WHITFIELD. Well, a lot of us did not believe that to be true. Anyway, thank you very much, and my time is expired. I recognized the gentleman from Illinois, Mr. Rush, for 5 minutes.

Mr. RUSH. Ms. McCabe, I really appreciate you coming before the subcommittee for the umpteenth time to deal with this issue, and if one didn't know any better they might think that the majority party really, really, really has it out for your agency.

And you're aware the premise of today's hearing is that EPA has repeatedly overstepped its authority and is really nearly issuing

burdensome new rules that will kill jobs and send the American economy down the tank.

You've heard these claims many times before the Republican Party cried wolf when it comes to actual cost and benefits attributed to Clean Air Act rules and other regulations issued by your agency.

We all understand that facts are not always the driving force behind many of these claims, and as a matter of fact it seems as though facts are standing in the way of a lot of these claims. But they keep coming anyway. I would like for you at some point in time during my questions to really focus on separating the, for this subcommittee, some of the truth of the ever present fiction that's in the room.

In my opening statement, I stated there were societal benefits associated with EPA rules. They go far beyond the quarterly earnings of certain industries.

Can you state some of the additional benefits to the EPA's regulatory framework that impacts all Americans?

Ms. MCCABE. Yes, sir. Thank you for the question.

It's clear that air pollution has significant impacts on public health across this country. That includes increased risk of asthma attacks, other respiratory illnesses, premature death, other sorts of health impacts that mean missed work days, missed school days for children and parents need to stay home.

These are real everyday issues that families across the country have to deal with. When it comes to climate we know that climate is changing, we know that that is having impacts that is being reflected in increased wildfires, increased droughts, increased flooding, increased violent storms, some of the things that you mentioned yourself, Congressman Rush.

These are having real impacts on people, on their health, on their economic well-being and their ability to live their lives in this country.

Mr. RUSH. Well, besides the health status of Americans and I've noticed for the last 25 years I've seen—I know more and more people, more and more families who are victimized by asthma over the last 25 or so years.

So the health issues are really, really troubling and a critical stage for our Nation. But what are some of the economic benefits associated with the EPA rules, particularly in areas of spurring new technology and innovations in transportation and electricity and in manufacturing sectors?

Ms. MCCABE. Yes. That's absolutely been the case. The rules over the years have spurred the creation and invention of pollution control technology which not only employs people here in the United States installing and designing that but is an exported product that the United States exports around the world, which brings, again, value back to the United States.

Mr. RUSH. So from a perspective of the health benefits to the Nation and the economic benefits to the Nation, you made an overall assessment of the work that the EPA has done in the past. Let's just take from the past to the present.

Ms. MCCABE. Well, each time EPA does a rule of economic significance we follow OMB requirements and do a cost benefit anal-

ysis, and as you alluded to in your opening remarks the net benefits of the EPA rules have numbered in the billions of dollars over time, far outweighing the costs of each one of those rules.

Mr. RUSH. Mr. Chairman, I want to thank you for your kindness and I yield back.

Mr. WHITFIELD. Gentleman yields back. Thank you.

At this time. I'd like to recognize the gentleman from Texas, Mr. Olson, for 5 minutes.

Mr. OLSON. I thank the Chair.

I thank you, Ms. McCabe, for joining us again today. Hope you had a happy 4th of July.

We sometimes disagree, sometimes strongly. But the folks back in Texas 22 appreciate your willingness to come before this committee.

My first question concerns your budget documents. You stressed that the Clean Power Plan goes far beyond traditional end of the pipe regulation.

In your fiscal year 2016 submittal to Congress you stated, and I quote, "the breadth and uniqueness of the Clean Power Plan rulemakings will require that the Agency devotes significant resources to its implementation.

Traditionally, the EPA's regulatory analysis would focus on only emitting sources and end of pipe controls. The existing power plant rule requires that the EPA look at the emission control strategies that are either shifting generation away from higher emitting plants or reducing the need for generation in the first place," end quote.

That sounds to me like you all wrote the law. As you know, only Congress writes the law. Article one, section one is very clear. All legislative powers herein granted shall be invested in a Congress of the United States which shall consist of a Senate and a House of Representatives.

Where in the Constitution or statute has Congress authorized EPA to go from end of pipe controls to generation shifting? Where is this in this document? Please tell me?

Ms. MCCABE. It's actually—Congressman, it's in Section 111(d) of the Clean Air Act, which is where our authority comes from. The—that section directs us to look at the approaches and controls that industry uses in order to develop our regulations that set reasonable standard for sources under 111(d).

It is not misdirected to end of pipe controls and we made—have studied the ways that the utility industry has found ways to reduce not just carbon but other air pollutants over the years. And so our rule was grounded very much in the types of approaches that that very industry has been using.

Mr. OLSON. But that's a big change. End of pipe to all these other things, that's Congress' job. That's our job. That's lawmaking. One further question about the rule of law. Do you believe the EPA has the authority to compel the future generation shifting from natural gas to renewables—not coal but natural gas to renewables? Do you have that authority? The same authority you're using now?

Ms. MCCABE. Our job is to develop rules that reduce air pollution. That's our job under the Clean Air Act, setting technology-

based standards following the direction that Congress gave us in Section 111(d).

We are not requiring any particular fuel to be used. We are providing broad opportunities for the industry to use the kinds of approaches that they use and would choose to use.

Mr. OLSON. Well, you're banning one source of power from being used—coal—for sure. I mean, you say you're not choosing that, but you are, ma'am. The real world says you are choosing power sources. You are picking winners and losers.

My second question is about the technological advancements that have allowed our country to emerge as the number-one producer in the world of oil. In fact, a study came out from Norway this past week.

A 3-year analysis confirmed that by 2020 America will have 264 billion barrels of recoverable oil compared to 256 billion barrels with Russia and 212 billion barrels with Saudi Arabia. We are number one, man.

America is number one again. My own State of Texas has been at the front of this revolution even with today's energy prices and that's why I am stunned to see concerns coming from the largest and most efficient oil and gas regulators in America, the people in Texas, the railroad commission when it comes before your agency.

Is it correct that EPA's new regulations will cause natural gas and crude oil production levels to decline? Yes or no?

Ms. MCCABE. I don't believe it will, sir.

Mr. OLSON. Well, ma'am, according to your economic impacts discussed in your final rule on Page 35,886, it says it does just that. A follow-up question—is it correct that EPA's new methane regulations will make the U.S. more reliant on foreign energy imports? Yes or no.

Ms. MCCABE. I don't believe that that's correct, sir.

Mr. OLSON. Same thing. Page 35,886. Your final rule says it will. I yield back.

Mr. WHITFIELD. Gentleman yields back. At this time I recognize the gentleman from California, Mr. McNerney, for 5 minutes.

Mr. MCNERNEY. I thank the chairman and I also submit with due respect that this is really a political hearing. Ms. McCabe, I'm going to ask some questions about exceptional events.

How often have public entities filed for exceptional events at the EPA?

Ms. MCCABE. I don't have an exact number, Congressman, but I would be happy to get you one. It's been a number of times.

Mr. MCNERNEY. OK. And how often are those approved, those exceptional event requests?

Ms. MCCABE. We've approved a number of them, and some of them we have not.

Mr. MCNERNEY. OK. Moving on—there's been talk in this committee about exceptional events. My office has talked to yours about exceptional events. Is the EPA working on anything that would modify exceptional events to take place during prolonged droughts and how much can be done on the regulatory side.

So, basically, I'm asking are exceptional droughts going to be considered for exceptional events in the future?

Ms. MCCABE. Yes, this is a very challenging situation, Congressman, especially as we see more and more drought coming. So drought in itself is not considered an exceptional event.

We are working with the States and with all stakeholders to try to find ways to make sure that we make this process as reasonable as possible and reflect that there can be situations in which there are high dust events that may be able to be considered exceptional events.

Mr. MCNERNEY. Well, that's good because as you know we're having a prolonged drought in the valley in California and it's making a very challenging situation for our districts.

Technological advancements on the electrical grid from transmission through end use have helped improve efficiency and reduced emissions. Many utilities have embraced the Clean Power Plan, including those in my own home State of California.

Can you talk about the Clean Energy Incentive Program and how it will help further promote innovative technologies?

Ms. MCCABE. Sure. One of the—one of the strengths that we feel of the Clean Power Plan is the openness that States have to bring in a use energy efficiency as a way to reduce their carbon emissions and there's many, many programs across the country many of which have been spawned and encouraged at the State and local level that are being very effective in bringing not only emissions down but also bringing value to the communities in which those technologies are installed.

Some of these are industrial applications, commercial applications and residential applications and we think that both through the Clean Energy Incentive Program, which is our voluntary early action program, but also throughout the life of the Clean Power Plan there—because those types of approaches are often very cost effective to implement that States will want to choose to invest in those.

Mr. MCNERNEY. So we're talking about creating jobs through developing new technologies?

Ms. MCCABE. Absolutely, and then implementing those technologies in our communities.

Mr. MCNERNEY. Now, I personally believe that implementing the Clean Power Plan will not result in a much higher—any electricity prices and I see a parallel between this and the sulfur dioxide emissions through the cap-and-trade program. Is that your thinking as well?

Ms. MCCABE. Well, we looked at that in our regular impact analysis and we predicted that in part because of the increased use of energy efficiency approaches that electric bills will actually go down in 2030 when the program is fully implemented.

Mr. MCNERNEY. So some of the statements we're hearing might actually scare consumers but in reality we expect lower or even electricity prices?

Ms. MCCABE. That's what our analysis showed.

Mr. MCNERNEY. You mentioned a proposed innovative collection request—information collection request for oil and gas industry related to methane emissions. How difficult is it to locate, measure and mitigate methane emissions?

Ms. McCABE. This is an area of very rapid development the industry is working very hard on it and there are many others in the research fields as well as at EPA that are working on these issues and across the Federal Government. So that's why we're going to put out a call for innovative ideas.

There are great advances in how people can detect emissions and it's important to remember that any leak of this material is leak of a product that can be sold. It's not just a loss of a natural resource. It's actually a valuable product.

So the industry itself has great incentive to find these leaks and fix them. And so detecting leaks and then also on the mitigation side.

Mr. McNERNEY. Does the EPA currently have any data on that, on collection emissions or detecting emissions?

Ms. McCABE. We do. We do that through our greenhouse gas emissions inventory program. Every year we collect information. Every year people are finding ways to be more accurate and more complete in that information.

Mr. McNERNEY. Are emissions, or capturing fugitive emissions, is that improving?

Ms. McCABE. Yes, it is and will continue to, for sure.

Mr. McNERNEY. All right. Thank you, Mr. Chairman.

Mr. WHITFIELD. The gentleman's time has expired. At this time I'll recognize the gentleman from Texas, Mr. Barton, for 5 minutes.

Mr. BARTON. Thank you, Mr. Chairman.

Would you define just as concisely as you can what you think the mission statement of the EPA is?

Ms. McCABE. To protect the health and the environment, implementing the laws that Congress has passed.

Mr. BARTON. Say that again.

Ms. McCABE. To protect public health and the environment, implementing the laws that Congress has passed.

Mr. BARTON. OK. I'll accept that.

Do you know how many pages of rules the EPA has issued since 2009 to try to be generous to do what you just said?

Ms. McCABE. I don't know the number of pages, Congressman.

Mr. BARTON. If I were to tell you that according to the majority staff it was 33,841 would you accept that?

Ms. McCABE. I would not disagree with you. I don't have any reason to know what the number is.

Mr. BARTON. OK. Well, that's what the majority staff memo says: 3,924 rules encompassing 33,841 pages.

Now, some of the major rules, and again, this is according to the majority staff so you can dispute this, the Clean Power Plan, the carbon pollution standard for power plants, mercury and air toxic standards for power plants, cross-State air pollution rules for power plants, coal ash rule for power plants, effluent guidelines for power plants, which would be—which would be water, wouldn't be air—316(b) rule for power plants, which again would be a water rule, not an air rule.

Air rules for the oil and gas industry, actions to reduce methane emissions from the oil and gas industry, the Boiler MACT, the Cement MACT, the Brick MACT, the Ozone NAAQS, the SO₂

NAAQS, the PM 2.5 MACTS and the RMP rule—those are the major—the 16 major rules.

Now, using 2008 as the baseline, can you tell me how all of these rules have improved air quality in the United States?

Ms. McCABE. Well, that's a large variety of rules addressing a number of things. They all come from requirements—

Mr. BARTON. OK. I'm not asking you where they come from. I'm taking you at your word which you say the mission statement of the EPA is. I have outlined to you how many rules you—not you personally but your agency—has issued. I've outlined the major rules according to the majority staff and I've asked you a basic question.

How much have all of those rules improved air quality in the United States? Ten percent? Five percent? Zero? You know, you can measure it by ozone reduction, particulate matter, however.

Surely, your agency has a metric to track how all of these rules are meeting your mission statement. I'm asking you what it is.

Ms. McCABE. We do have metrics and I would be happy to provide specific numbers. SO₂ emissions have gone down considerably in this country. Ozone levels have gone down. Ninety-five percent of the areas that did not meet the 1997 ozone standard now meet it.

Mr. BARTON. So can you give me or give the committee a specific—you can do it by rule, you can do it generically. My seat-of-the-pants nonscientific estimate is it hasn't had an impact. Has not changed the basic air quality 1 percent.

Ms. McCABE. We would—

Mr. BARTON. Now, you can prove me wrong and I'm happy to see it but I want it statistically. I want it engineering scientifically proven.

What I can tell you is that you have impacted—not you personally but EPA has impacted the economy by billions of dollars. You have killed the coal industry, basically. Killed it. Which, to his credit, President Obama said he wanted to do.

But I want to give you a specific example. This is a power plant that's not in my district. It's in Congressman Flores' district.

It's a Big Brown plant right outside of Fairfield, Texas, in Freestone County. That is a coal-fired power plant that's been there approximately 50 years. It employs about 500 people directly and is the single biggest economic generator in Freestone County.

It's probably going to close in the next year or so because of some of these rules. It's just—they can't meet the compliance costs and they're just going to probably have to close the plant.

If that happens and if you're still at the EPA I want you to go to Fairfield, Texas with Congressman Bill Flores and explain to those people who've lost their jobs how you've improved their environment.

I want you to do that, because I don't think it's possible. And, you know, I voted for the Clean Air Act amendments in 1991. I want clean air.

I want clean water. But I don't want an organized attack on the energy-producing sector of America because of, to use Mr. McNerney's term, a political decision to go after hydrocarbons. And with that, Mr. Chairman, I yield back.

Mr. WHITFIELD. Gentleman's time is expired. At this time I'll recognize the gentleman from Texas, Mr. Green, for 5 minutes.

Mr. GREEN. Thank you, Mr. Chairman and Ranking Member, for holding the hearing. I want to thank Acting Administrator McCabe for being here and the EPA's regulatory activity is the subject of much debate and we're happy to have you before our committee once again to discuss the issues.

The EPA's Clean Power Plan changed significantly from the proposed rule and the final product. My understanding was that the EPA wanted to be responsive to stakeholder feedback including many concerns brought up by industry. The EPA proposed Federal implementation plans on October 23rd of 2015.

The final rule indicated a 90-day comment period that ended in January of 2016. Did the Agency extend that comment period?

Ms. MCCABE. I don't believe we did, Congressman, but it's closed now. So we're considering all the comments that we got.

Mr. GREEN. OK. How many comments had the Agency received?

Ms. MCCABE. Oh, gosh, on the Federal plan I'm not sure. But we received many hundreds of thousands of comments on the Clean Power Plan and its various pieces over the years.

Mr. GREEN. What type of—

Ms. MCCABE. Millions, in fact.

Mr. GREEN. OK. What type of feedback has the Agency received?

Ms. MCCABE. Well, if you're speaking about the Federal plan and the model rules we've got a lot of feedback on the how those rules can help States as they design their plans, very constructive feedback on how to make the rules workable for States while preserving the flexibility that the States have under the plan.

Mr. GREEN. What did EPA do to respond to those millions of comments?

Ms. MCCABE. Well, in the—

Mr. GREEN. Just a general—did you modify the plan or did you—

Ms. MCCABE. In the Clean Power Plan itself, yes, we made a number of changes in response to the comments both on process issues, on our evaluation of the underlying data in response to additional data that we got, which is a routine occurrence when we get good input from people in a rule making.

Mr. GREEN. OK. Well, in Texas, obviously, we are an oil and gas State, and my Pennsylvania and Ohio friends tell me we burnt dirt and call it coal in central and east Texas. But we invest significant amounts in wind power—in fact, the largest wind power production of any State.

I'd like to see the same thing done for solar. How does EPA envision the Clean Energy Incentive Program encouraging new solar construction?

Ms. MCCABE. The way the Clean Energy Incentive Program works, which as I've said already this morning is voluntary if the State chooses to proceed with it, would incentivize renewable energy and also energy efficiency by providing additional allowances into the trading system that we expect States will set up.

So it just provides a little extra bump for those technologies to get going early in the system and provide the energy that is carbon free.

Mr. GREEN. OK. The EPA wants to establish credit reserve and we're running the verification authenticity issues within the renewable fuel standard. I'd prefer not to see that again. How does the EPA plan to verify and authenticate credits under the CEIP, the Clean Energy Incentive Program?

Ms. MCCABE. Very good question. So there are—because there is a lot of work already underway that doesn't have to do with EPA for people to generate credits for energy efficiency under State programs, there are already systems in place that allow people to appropriately verify that the reductions are real and we are relying a lot on those systems not creating something wholly new.

Mr. GREEN. And finally, the EPA had begun collecting information on existing oil and gas production wells. Given that there are approximately 40,000 oil and gas wells in the U.S., what challenge does the EPA foresee in regulating existing sources in a correlator that so many of these wells are small producing wells that make up maybe 10 percent of the total production?

Is there any discussion in EPA to exempt out those smaller wells? Because if they are only 10 percent of the production you would think that that would be, you know, not as big a problem as the other 90 percent.

Ms. MCCABE. This is exactly why we need to collect this information. We are very far from making any decisions or even recommendations about what our rule would look like.

But until we have this kind of information that can help us understand where the real significant emissions are, how much it will cost and what technologies are available to address them, we can't really move forward with those rules which is why we've got to collect the information.

Mr. GREEN. OK. Mr. Chairman, thank you. I yield back.

Mr. WHITFIELD. Gentleman yields back.

At this time I recognize the gentleman from Illinois, Mr. Shimkus, for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman.

So many questions, so little time. So I'm just going to jump into some of the points. I love the hearings because I love to pick up where other people have talked about to other than what's been prepared for us to ask.

To my colleague Mr. Barton, he cited one power plant. I can cite three in Illinois—Wood River, Baldwin, Newton—all are at major risk of closing. That's why—that's why I want to talk about this new power plant in Japan.

If there is a way we could transition and incentivize transitioning older generation to new generation then we'd give these workers some hope. We'd give coal miners some hope.

But under the 111(b) standards we can't build this power plant and this is the cleanest most perfect plant we can build with technology right now. Well, we can't—the Japanese built it. OK.

And so a major coal mining company just announced two days ago they're laying off 4,400 workers—4,400. So when we talk about the benefits which you laid out, I'm sure maybe we can sell some new technology.

You have to consider the loss. You have to really appreciate the job dislocation that's occurring in major coal-producing areas in our

country, and if there's emotions and if there's politics behind that's because we're the ones that have to talk to the coal-mining families.

We've got to talk to the mayor and the county board chairman who are losing their major source of revenue because of power plants going to close.

So we don't see that in your—we never see that in the analysis. When Congressman Barton read the numerous rules and regs—I have done that before too—in your analysis you always take, like, the Clean Power Plan and say this is the cost, this is the benefit, boom.

You never do the cost of the cumulative aspects of regulation. They pile on. In fact, I would say the costs are exponential versus additive.

And so that's the crushing effect that's really occurring in coal-fired power plant communities and in coal mining communities across this country, and I think the Supreme Court—this is the first EPA rule and reg that they stayed.

This is not like—this was a major deal for them to do that, and so the question should be asked is why. The answer is because we have successfully made the argument that if a rule is being litigated the pencil should go down.

You can't force compliance when the final decision has been made on the legality of the rule or reg because if you force them to keep moving they'll shut down. They'll close. And then as we saw in other regs, oh no, we were wrong—we illegally promulgated this rule.

So the Supreme Court said no, stay. So that kind of brings me to the—one of the questions that I wanted to ask. In the wake of the stay, EPA officials have stated that certain compliance deadlines in the Clean Power Plan may not be penalized should the stay be lifted, the suggestion being here that States and other stakeholders should be prudent to being voluntarily preparing now for rule implementation in case its legality is upheld.

OK. First of all, pens should go down. You ought to be telling people, prepare for a rule that we don't know if it's going to be legal or not. So here's the question:

Should parties granted the stay by the Supreme Court in any way be penalized if they take no action on the Clean Power Plan or EPA's derivative programs and guidance during pendency of the litigation?

Ms. MCCABE. We are absolutely not implementing—there are no expectations that any State, down State or not, has any obligations currently under the Clean Power Plan.

Mr. SHIMKUS. Yes, the question is should they be penalized. You still have closing of the windows. You still have comments going. What if they say we're not going to make comments until we have a final ruling from the Supreme Court?

Ms. MCCABE. But I don't see that as a penalty, Congressman. It's their choice whether they want to comment or not. But that particular rule—

Mr. SHIMKUS. But will you shorten the time frame? I mean, are you going to now say you're not prepared to meet it? I'm assuming it's not going to be ruled favorably. I'm going to assume that it's

because you've morphed the Clean Air Act and you've provided powers to the Agency that weren't granted under the original legislation. So I think the Supreme Court is going to say it's illegal.

But assuming it is, the question is if States say we've got to stay, we're not doing anything, many people are concerned that you are moving forward regardless of the stay offered by the Supreme Court.

Ms. MCCABE. Well, I'll just say again, Congressman, that with—in close consultation with the Department of Justice there is nothing that we are doing now that implements the Clean Power Plan in any way.

That was what was stayed. The Supreme Court did not stay all action on climate. It didn't stay action by States, that they may choose to take on climate.

It didn't stay efforts by EPA to provide assistance to States when they ask us for that assistance, which they have done, including that we move forward and provide more details on the Clean Energy Incentive Program.

Mr. SHIMKUS. Thank you very much.

Mr. WHITFIELD. The gentleman's time has expired.

At this time, I will recognize the gentleman from New York, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair, and thank you, Administrator McCabe, for your hard work and for your appearance here today.

This is just the latest in a series of hearings to push a message that strengthening standards to protect our public health and the environment are too costly, unachievable or a drag or a drag on our economy.

Couple of observations—I would think that the greatest—one of the greatest impacts on the coal-fired industry happens to be falling natural gas prices. And then further evidence is clear that the public health and environmental benefits of Clean Air Act regulations have far outweighed the costs of pollution reduction and we owe it to the next generations—generations unborn to clean our air.

Because of the Clean Air Act, we have grown our economy, created jobs and innovated new solutions to pollution controls. In the United States, leaks from oil and gas wells are the largest source of methane gas in the atmosphere.

In April, the EPA released a report that concluded methane from oil and gas leaks makes up about a third of total methane emissions.

In May, EPA announced steps to reduce those methane emissions. We often hear about carbon emissions but Administrator McCabe, can you explain how curbing methane emissions will indeed help combat climate change?

Ms. MCCABE. Yes, Congressman. As some of you may know that methane is about 25 times more potent as a climate pollutant than carbon dioxide. So even though CO₂ is emitted in far greater amounts, methane is a very serious contributor to climate change.

You correctly noted that the extent of the emissions of methane from the oil and gas industry many of those emission are unintentional. They are leaks. They are not necessary, and there is technology that is available. Several States are well on their way to—

have already put in place like the ones that EPA just finalized to regulate these emissions.

So that's making a huge contribution to, as you say, our health today and future generations.

Mr. TONKO. Thank you. And when EPA is going through a rule making process, are there significant opportunities for stakeholders to provide input in the pending regulation?

Ms. MCCABE. There absolutely are. There are, of course, the formal opportunities for public comment when we do a proposal.

But EPA operates routinely in the Office of Air and Radiation where I work, by doing extensive outreach to the stakeholders which includes the industry, first and foremost. We can't develop these rules if we don't have good relationships with the industry where we get good information from them.

We also work extensively with the States who are our co-regulators and actually are on the ground putting these programs in place and making sure that they achieve the benefits that they are designed to achieve.

So far before we put pen to paper on a proposal, we have had extensive discussions with the industry and other stakeholders.

Mr. TONKO. Well, for the recent—and I thank you for that. For the recent methane rule, I am informed that EPA received more than 900,000 public comments and held a number of public hearings. Is that in fact correct?

Ms. MCCABE. That is correct.

Mr. TONKO. And the regulation was finalized after giving consideration to cost benefit analyses and technical justification. Is that correct?

Ms. MCCABE. That is correct and we made adjustments in the final rule in response to some of those comments we got.

Mr. TONKO. OK. Was this methane regulation based on cost effectiveness and availability of technology?

Ms. MCCABE. That's correct.

Mr. TONKO. Well, it sounds like the levels set in this regulation are achievable. The total climate benefit for this rule or the benefits for this rule are estimated at I'm told \$690 million. Is that correct?

Ms. MCCABE. That is correct.

Mr. TONKO. And is this more than the estimated cost? Are the benefits—

Ms. MCCABE. From the proposal?

Mr. TONKO. Yes.

Ms. MCCABE. You know, I don't remember off the top of my head but we can get that information for you.

Mr. TONKO. OK. That would be helpful. On top of that, EPA did not factor in the health benefits from reductions in other pollutants, which can be difficult to quantify but can have serious health consequences, particularly for vulnerable populations such as children and the elderly. Can you explain the public health benefits of this new regulation?

Ms. MCCABE. Yes, sir. So in addition to the methane reductions, which of course are related to climate change, these facilities emit sort of the standard—some of the standard air pollutants that we worry about, those that contribute to ozone formation and fine par-

ticles. They also emit toxic emissions and, as you know, some of those are very difficult to quantify the benefits because the research doesn't exist. But these are chemicals that are known to have adverse impacts on public health.

Mr. TONKO. And show themselves in what sort of health impact?

Ms. MCCABE. Some of them could be carcinogenic. Some of them could affect the respiratory system, the cardiovascular system, those sorts of impacts.

Mr. TONKO. OK. I've exhausted my time. But with that, I thank you and yield back, Mr. Chair.

Mr. WHITFIELD. The gentleman yields back.

At this time I will recognize the gentleman from Ohio, Mr. Latta, for 5 minutes.

Mr. LATTI. Well, thanks, Mr. Chairman and Acting Assistant Administrator. Thanks for being with us again. Really great to have you here again and hear the questions being asked, at the end of the day.

Let me ask my first question. Under the current statutory framework is it the State environmental regulators or the States' energy regulators who are supposed to plan the amount of renewables, natural gas, coal and other resources for a State's electricity sector?

Ms. MCCABE. The choices about energy policy would be made by—generally, I imagine by energy agencies, although every State is set up somewhat differently.

Mr. LATTI. OK. When you say that they might be set up differently because wouldn't the expertise lie with the State energy regulators and not the State environmental regulators? Is that correct?

Ms. MCCABE. I wouldn't disagree with that. I just—my point is that some agents—some States have energy and environment together and some have them separately.

Mr. LATTI. OK. Let me ask this. How is that the Clean Power Plan is not usurping the authority and expertise of State energy regulators and transferring decision making to the environment regulators?

Ms. MCCABE. Because the Clean Power Plan is all about carbon emissions, which is an air pollutant as identified by the U.S. Supreme Court, and the rule sets standards for emissions of air pollution. It leaves the choices of how to achieve those reduction up to the States to plan and achieve.

Mr. LATTI. Well, where does the EPA derive its knowledge and expertise about how electricity is planned, operated and paid for?

Ms. MCCABE. We consult regularly with the energy agencies and the energy expertise across the Federal Government. We also have long relationships with the regional transmission organizations, with State energy regulators as well as environmental regulators.

Mr. LATTI. OK. But again, when we're talking about being paid for, who ultimately pays for this? Who pays for this?

Ms. MCCABE. I'm sorry. Who pays for what?

Mr. LATTI. Who pays for it? OK. When you are talking about when you are—on the expertise and how electricity is planned, operated and paid for. But when electricity is generated who is paying for it? Because when you put more regulations out there and increase the cost because, you know, going back to the gentleman

from Illinois and the gentleman from Texas and their examples—let me give you another one.

In Ohio, the electric co-ops have built a plant on the Ohio River and the—you know, the question for them then is what happens to their electricity rates and the competitiveness through the plant if all of a sudden the costs are being driven up by more regulations of which I know that Mr. Barton had pointed out the number of pages that are out there.

Who's going to pay that? Who's the ultimate—who is going to be the ultimate one that has to pay for this?

Ms. McCABE. Well, Congressman, of course, the consumer pays the bill. I think it really is important to note what Mr. Tonko said, which is that EPA regulations are not at all the only thing that's affecting the energy system in this country and that is a very important point, and it gets lost.

Mr. LATTA. And I think it also takes in effect—if you look at the number of manufacturing jobs members have in their district, and I have about 60,000 and I also have the largest farm income producing district in the State.

So we have a lot of folks out there needing a lot of electricity, and when you put the two together and also hearing from my folks because if you go back—you know, when you talk about you're looking at statistics and things like that I've been told and it's been reported that if we had the exact same effect that we had in January of 2014, which was one of the coldest winters on record in the State of Ohio, we did not go into brownouts or blackouts because we had enough existing power out there that if we had the exact same conditions today we would have those conditions of blackouts and brownouts because we have plants closing.

So I think, you know, one of the concerns out there is when you're talking about who's paying for this it's going to be the consumer. But it's also the plants out there because they can't keep up with the regs.

Let me move on. In the Clean Power Plan, for existing electric-generating units, EPA contends Section 111(d) of the Clean Air Act authorizes the Agency to force generation shifting away from fossil fuels to renewable energy and efficiency programs.

If EPA can force restructuring of the electricity sector, can it also force the restructuring of other sectors?

Ms. McCABE. Well, I take issue with your use of the word force. The Clean Power Plan doesn't force anything. It follows the—what the industry is doing. The utility industry and electricity supply is very different in the way it operates from any other industry.

Mr. LATTA. Well, let me ask this. Are any of these 70 source categories currently regulated under the Section 111 of the Clean Air Act exempt from this type of restructuring?

Ms. McCABE. I just can't accept the premise of your question, Congressman.

Mr. LATTA. But you are saying that you can't accept the premise but are—but are any of the 70 source categories currently regulated under this section of the Clean Air Act, which is 111 of the Clean Air Act, exempt from this type of restructuring? So you're saying that you can't accept the question?

Ms. McCABE. Well, I don't agree that we are restructuring the energy system through our rule. I also want to draw a distinction between the way the energy system works, which is a—based on a regional interstate grid, very different from other types of industries.

So the question doesn't really make sense.

Mr. LATTA. Well, you know, if I could, Mr. Chairman, I'd like to maybe submit the remainder of my questions to the EPA for—because my time has expired.

Mr. WHITFIELD. Yes. OK. The gentleman's time has expired and you may submit for the record.

At this time I'd like to recognize the gentlelady from Florida, Ms. Castor, for 5 minutes.

Ms. CASTOR. Well, thank you very much, Mr. Chairman, for calling this hearing to review the benefits of our Environmental Protection Agency, especially to our health and to our economy and with the focus on the Clean Air Act.

For those of you in the audience that really like to get into the numbers of looking at the costs and benefits relating to rules—our important bedrock environmental rules, the Congress requires under the Regulatory Right to Know Act that the Office of Management and Budget submit to us a report and one was just filed in March and it—what it finds is that EPA's major rules promulgated between 2004 and 2014 yielded more benefits than major rules promulgated by other agencies over the same period.

In the aggregate, the major rules promulgated by EPA have benefits between \$160 billion and \$788 billion compared to costs of just \$38 billion to \$45 billion. Rules promulgated by the EPA in fiscal year 2014 alone have resulted in an estimated \$13 billion worth of benefits, far exceeding the \$1 billion in costs—in estimated cost and by 2020 the benefits—the economic benefit of reducing air pollution is estimated at almost \$2 trillion, exceeding costs by 30 to 1.

They go into much greater detail. So for those of you that like to really dig in to what criteria they look at I encourage you to do that.

You know, it's very difficult for the Congress and the public sometimes to focus on impacts over decades of time. We're always focused on the here and now. But I'll tell you coming—watching the looming cost that we are going to suffer if we do not address climate change in a very aggressive it's really stark and already in the State of Florida we have local governments having and taxpayers—local taxpayers having to pony up multimillion dollars to adapt.

In Miami, they're already spending \$500 million, \$600 million because even on sunny days at high tide the streets are flooded and they're having now to repair water systems and wastewater systems already.

And here are some of the other costs that really aren't discussed. We hear a lot of about cost to the industrial sector. But let's talk about our neighbors back home. What they predict are rising costs in property insurance from extreme weather events, flood insurance—the Congress has grappled with flood insurance—the rising cost of flood insurance.

One global reinsurance giant predicts that extreme weather events are going to leave taxpayers on the hook for billions and billions of dollars in future years. Florida depends on tourism.

We're going to have to renourish our beaches. That's a very significant cost. And the Congress is called upon time and time again to respond to emergencies, extreme weather events. So let's not lose sight of the true cost to taxpayers and our neighbors back home, our small businesses from mom and pop shops to all sorts of businesses. That has to be factored in.

So Administrator McCabe, I was glad to hear in your testimony that even though the Clean Power Plan is in—on kind of a regulatory hold for now that many States have been moving forward voluntarily. Can you give us a quick snapshot of what's being done voluntarily even though we're kind of in a temporary holding pattern?

Ms. McCABE. Uh-huh. Yes, absolutely. A number of the States that are moving forward are States that have been looking at these issues for a number of years.

They are looking at reasonable restrictions on carbon emissions from their utility systems or even more broadly across their economies. They're looking at ways to integrate their energy planning, their increased investment in wind and solar, in energy efficiency and planning those in for a carbon—a freer carbon future.

Ms. CASTOR. And do I understand that many States in partnership with their electric utilities are already close to meeting the goals laid out in the Clean Power Plan?

Ms. McCABE. I believe that that's generally correct. Of course, the goals are—in the Clean Power Plan are many years out into the future. But yes, there are States and utilities that are well on their way, that utilities are increasingly investing and relying on wind and solar as a significant portion of their portfolio.

Ms. CASTOR. And those are job creators. I know EPA doesn't really look at that side of the equation but one recent report predicts that due to the Clean Power Plan and just the significant shift towards renewables that we can anticipate 1 million new jobs in clean energy by 2030.

So there is a lot that goes into this cost benefit equation. But I think it's plain as day that we have got to act now aggressively to address the looming costs of the change in climate.

Thank you, and I yield back.

Mr. WHITFIELD. At this time, the Chair recognizes the gentleman from West Virginia, Mr. McKinley, for 5 minutes.

Mr. MCKINLEY. Thank you, Mr. Chairman, and thank you, Ms. McCabe, for coming again to this. It just seems like you were here not too long ago.

But let me go back over a little bit to restate that it's my understanding that this hearing was to examine the effects of major regulations on the energy and the industrial sectors. Is that your understanding of the purpose of this hearing?

Ms. McCABE. I believe so, yes.

Mr. MCKINLEY. OK. Thank you. Now, so I go to that is that these effects of these regulations and there was a report that Lisa Jackson used when she came here back 6 years ago. Used to wave this report in front of us that was written by Morgenstern back in 1999

and it was primarily intended to demonstrate that she believed that more regulations actually helped the economy.

As a matter of fact, she said that from this report that one and a half jobs are created for every million dollars spent in meeting those regulations. Do you remember that report?

Ms. McCABE. Not specifically.

Mr. MCKINLEY. OK. She used to wave this quite often, as often as you came or come, she used to come and she used to use this all the time. This justifies why we have so many regulations.

So I'm just curious about that because, to me, it appears from looking at the kind of three points of some of the things these major regulations—there's one about that using this about the jobs impact.

I think we're picking winners and losers because I don't see one and a half jobs being created for the hundreds of billions of dollars that have been spent.

It appears more we're picking winners and losers because in the coal fields across this country they are struggling with it. I know that there have been over 40,000 coal jobs lost—direct coal jobs—let alone the 300,000 secondary jobs that are affected with it.

So I'm struggling with the premise. So you can't tell me whether or not you agree with this report any longer?

Ms. McCABE. I am not here to speak about that report, Congressman, nor am I here to speak about—

Mr. MCKINLEY. OK.

Ms. McCABE [continuing]. How much you would value any particular regulation.

Mr. MCKINLEY. Well, I just want—in terms of the economy, what it's doing to the economy is these regulations, what have happened with it because I think there was an initial premise this was going to save jobs or create jobs. I don't think it did.

Then we went—then we went to the environmental—you pivoted to the environment and temperature and we talked about temperatures were going to be under control if we pass some of these rules and regs affecting the coal and the gas industry.

But yet even under the Clean Power Plan the EPA is accepting that it only is going to reduce the temperature or lessen it by 15 thousandths of a degree by the year 2100. I struggle with that.

So it doesn't surprise me at all that now the EPA is pivoting from the fact that jobs weren't created that there's no temperature increase. So now they're—just in March, Gina McCarthy was before us and she testified that she said that it's not about the environment, it's not about the health and safety for the people that we've been passing this.

She said it's about global leadership and I think wow, that was—that was a jaw-dropping revelation that she came out—this is not about the environment is why we're passing these—despite what you just said to Joe Barton that's not what this whole idea was about.

So I'm struggling with it because we've got a chart that shows yes, we may be doing it, adhering to it in America but the rest of the world is not following our global leadership that was being promoted.

The rest of the world is continuing to use coal and create more fossil fuel and CO₂ emissions in the atmosphere with this. Germany is building 26. India is going to double its production with it.

So, to me, it comes across more as just an effort to have bigger, broader, stronger, more intrusive Government as compared to really helping people and their economy.

So we have seen it in the ag community what the EPA is affecting, that that part of our sector of our economy, when they went after the waters of the United States they went after the farm dust rule, if you remember, for a while.

But then they backed off. Did they back—did you all back off because you got push back? Because the science—you were saying how it was supposed to be good for your health. But once it was promoted on the farm dust you backed off.

Ms. MCCABE. Congressman, respectfully, I have to disagree with the way you're characterizing various prior statements of the Administrator and others in EPA just on a whole range of issues.

Mr. MCKINLEY. I'm just going from testimony that they gave. I'm not characterizing. Then you came out with a water quality standard that you didn't even give the States a chance to have a comment period.

You came out with a water advisory that is 70 times more stringent than it is in Europe, 20 times more than numbers of States. Communities that are struggling in rural America to try to meet the water quality are going to spend millions and billions of dollars across this country to meet a standard that is questionable as to whether or not it's going to have an effect with it.

So I'm going to go back in the remaining time—maybe I've lost my time—what's the answer, back to Joe Barton, when we talk to a coal miner that lost his job? It's OK because the environment is better? Is that what you want to tell him?

Ms. MCCABE. No. No, sir. Not at all. But I think it's important to recognize that there's lots of things going on in the energy system and coal is not as competitive as it was because of natural gas and other things going on in the industry.

Mr. MCKINLEY. But States with natural gas are also into recession. I'm sorry I'm going over my time.

Mr. WHITFIELD. Yes, the gentleman's time has expired.

Mr. MCKINLEY. But we've gone over to Louisiana, New Mexico, Oklahoma, Illinois, Wisconsin—they are all struggling with this thing, and they are not coal-producing States.

Mr. WHITFIELD. At this time I would like to recognize the gentleman from Iowa, Mr. Loeb sack, for 5 minutes.

Mr. LOEBSACK. Thank you, Mr. Chair. Good to see you, Madam Administrator. It's always good to have you here.

We're talking about a lot of very important issues here and actually in some ways I can identify with some of the things that were just said, being from Iowa. We have a lot of issues having to do with water, a lot of different things.

I am confident that we can fight our way through a lot of those issues. We're going to have to go to the State level, at the local level, at the Federal level.

I think we're going to have to get all the stakeholders together eventually and we're going to have to work through this. It's not going to be easy, there's no question about that, especially on the water issue.

But I do want to speak to two different issues, if I may. As you might imagine, I want to talk to you about ethanol a little bit. I want to talk to you about wind a little bit, two things that are very important for the State of Iowa, two issues, I think, where we have made tremendous progress over the years as well.

When it comes to ethanol and the RFS, the renewable volume obligations—the RVOs—we know because the Department of Energy has stated that using ethanol as a vehicle fuel has measurable greenhouse gas emissions benefits compared with using gasoline.

CO₂ released when ethanol is used in vehicles is offset by CO₂ captured when crops that we use for the ethanol are grown.

Given the role that renewable fuels play in cutting down greenhouse gases, and I realize it's not universally accepted but I believe that that is in fact the case, shouldn't the recent RFS or RVOs—the renewable volume obligations—for 2017 be increased to achieve this goal?

Why are they at the level that they're at, given that the EPA itself has said that this is good for our environment?

Ms. McCABE. Yes. Yes, sir. Well, you're exactly right. That is why Congress passed the renewable fuel standard, one of the reasons. Also the other was energy security and we have found that there have been increases in a whole range of renewable fuels including ethanol that are good for climate change.

In our proposal we actually did propose an increase from the prior year in the amount of renewable fuel that would be expected to be used in the transportation system and each year as we've done that RVO those numbers have grown.

We have—our job is to set those expectations and we have done that after a careful review of what the system is able to accommodate in order for those fuels to be used. Congress didn't just want them to be produced and sit somewhere. They wanted them to be actually used in the system and replace the petroleum fuels.

Mr. LOEBSACK. Do you agree that if we have infrastructure improvements, especially for E15, that that would help us move along a little bit more quickly in terms of trying to get to the goal that we're supposed to get to?

Ms. McCABE. I do think so and I think that that infrastructure is growing. It's just taking a little bit longer than everybody thought it would.

Mr. LOEBSACK. Right, and I won't get too much in detail about the methodology used by the EPA but that's always a big concern, obviously, that a lot of us have in these States that produce ethanol and biodiesel for that matter too. It's not just an ethanol issue, as you know.

So I just want to make sure that we stay on top of this because we can in fact accommodate, I think, more production of ethanol and biodiesel. We've just got to—in particular we've got to deal with the infrastructure issue, I think, going forward.

You know, too, that Iowa is—I know that Congressman Green talked about Texas being a wind producer. In Iowa, you know,

we're well over 30 percent of our electricity now is accounted for by wind energy, as you know.

The concern that a lot of us in Iowa has is the Clean Power Plan, which as you know says that we've got to achieve a 32 percent reduction in carbon pollution.

But the start date for all of that is January of 2013 and a lot of States like Iowa, at least some States and Iowa in particular, achieved a tremendous amount of progress prior to that date. And I mentioned this to Administrator McCarthy as well, kind of gone round and round about this—you know, 32 percent.

The Clean Power Plan, I think, makes a lot of sense moving forward. It's going to be more difficult for some States than others. But Iowa has already made tremendous progress and we're not getting an credit for the progress that we made in the past by starting that date at 2013.

Is there any possibility for flexibility for States like Iowa to get credit for what we've already done?

I think it's unfair in some ways to start at that particular date and not take into account what States like Iowa have already done, especially on wind production.

Ms. MCCABE. Yes. Well, I think this question really reflects this debate that folks have been having this morning about what is our role under 111(d).

It is not an energy policy rule. It is technology rule and for any technology rule we do under Clean Air Act we have to pick a starting point. And you're always going to have people on one side or the other that wishes the starting date were a different time. We picked ours because of the information that we had from sources out of that date.

It is still the case, however, Congressman, that States like Iowa that have been aggressive and are continuing to be aggressive in renewable energy are charting themselves a path to meet the Clean Power Plan and especially if States choose to get into a relationship with one another, in trading relationships, that can provide great advantages to a State that is really on the leading edge of developing those resources.

Mr. LOEBSACK. I would just encourage more flexibility moving forward on this issue. Thank you, Madam Administrator. Thank you, Mr. Chair.

Mr. WHITFIELD. At this time the Chair recognizes the gentleman from Virginia, Mr. Griffith, for 5 minutes.

Mr. GRIFFITH. Thank you, Mr. Chairman, and Madam Administrator. I'm going to read to you from Section 321 of the Clean Air Act. This provides, quote, "the Administrator shall conduct continuing evaluations of potential loss for shifts of employment which may result from the administration or enforcement of the provisions of the Clean Air Act and applicable implementation plans including where appropriate investigating threatened plant closures or reductions in employment allegedly resulting from such administration or enforcement."

Yes or no, does the EPA—I would submit the EPA does not conduct these continuing evaluations. Isn't that correct?

Ms. MCCABE. Sir, whenever we do a regulation we look at those very characteristics in great detail.

Mr. GRIFFITH. You look at those characteristics when you propose a new regulation but you do not conduct continuing evaluations of potential loss through shifts of employment and then investigate threatened plant closures or reductions in employment allegedly resulting from the administration or enforcement of those regulations. Isn't that true? Yes or no.

Ms. MCCABE. There have been a variety of efforts over the years, but you're reflecting that there is a difference of opinion about our obligations under that study.

Mr. GRIFFITH. Well, there certainly isn't a difference of opinion with "shall," is there? "Shall" means you shall do it, does it not? There's no wiggle room, is there?

Ms. MCCABE. It does say "shall," but it reflects a set of activities that—

Mr. GRIFFITH. All right.

Ms. MCCABE [continuing]. People could disagree on exactly what those were.

Mr. GRIFFITH. I don't know how you disagree on that, ma'am. But we'll just leave that as it is. Despite that plain language, I understand that in 2009 in response to a letter from Mr. Barton and Mr. Walden, the EPA said it has not interpreted the CAA Section 321 to require the EPA to conduct employment investigations and taking regulatory actions. Can I interpret your prior answers to mean that it's still the position of the EPA?

Ms. MCCABE. I wasn't involved in the writing of that letter, Congressman. But I'd be happy to provide further information on it.

Mr. GRIFFITH. All right. I will follow up with that.

According to the American Coalition for Clean Coal Electricity by the end of 2016 it is estimated that almost 51 megawatts of coal-fired generation will retire or convert because of EPA policies.

And I know the EPA was asked to conduct an investigation pursuant to 321 of the Clean Air Act with respect to any of these plant retirements. But that has not happened, has it?

Ms. MCCABE. As I said, each time we do a rule we look—that affects the power industry we do a forecast to get a sense of what the impact on the industry may be.

Mr. GRIFFITH. But when Murray Energy asked you all to do this and filed suit on that, you asked that it be dismissed and claimed that the energy corporation did not have standing to ask you to do that nor had they been harmed by the Clean Air Act. Have you looked into the situation at all?

Ms. MCCABE. Sir, I really don't want to speak to ongoing litigation, which you understand is very active.

Mr. GRIFFITH. I understand that. But I will tell you, here is the concern I have. My district has lost thousands of jobs. I don't have any Murray Energy plants or coal-generating plants or coal-production plants in my district.

But it does concern me when they send out last week a notice that they are going to lay off another 4,400 employees. According to an article in the Wall Street Journal, a year ago they had 8,400 employees.

Now they have 5,356 and they are laying off 80 percent of those, or at least they have sent out the warning notices required by law.

But they may lay off 80 percent of those. While it is true that natural gas prices are low, it is also true that regulations have killed the coal industry in many, many ways and it doesn't seem that you all are following through on your Section 321 requirement that your constantly continuing evaluations of potential loss or shifts in employment and then when there are losses, and Mr. Murray has made it very clear there are losses coming. And if you don't want to do that one because there's litigation look at Alpha Natural Resources.

I don't think they're suing you right now. But they are in bankruptcy court and they do have a lot of—or had a lot of employees in my district. There are still some but not as many as there were.

You have a requirement to follow up on this. I don't believe you're doing it. Your answers here today indicate to me you're not doing it. The industry is in trouble.

I will also tell you what's interesting is you talked about methane being a whole lot worse than carbon dioxide. Right now they are proposing in my region two or three new giant gas pipelines.

Now, I am not against the gas industry. But you have indicated there is a lot of leakage when they're both getting the natural gas out of the ground, which we have some in the district, and then when they are piping it across the country.

But your policies on coal have pushed people to natural gas even before the coal-fired power plants have used up their useful life and I think that's a shame because I think you all have been penny wise and pound foolish and you certainly have not considered the fact that thousands, tens of thousands, of people in the coal industry and those industries that supply the coal industry have lost their jobs and you all as a group have not done your job under Section 321 of the Clean Air Act.

I yield back.

Mr. WHITFIELD. Gentleman's time has expired. The gentleman from Illinois is recognized for 5 minutes. Mr. Kinzinger.

Mr. KINZINGER. Thank you, Mr. Chairman, and Acting Assistant Administrator, thank you for being here, and thanks for your service to your country.

I echo the concerns of many of my colleagues about the sheer number of regulations that have come out of the EPA recently. But I'm more concerned about how our economy and the small businesses and manufacturers are supposed to handle all these regulations.

I think many Americans are very concerned, rightly so, about the state of our economy and I share those concerns, especially in light of the cost of so many of the EPA's regulations.

I just have a few questions. In a recent report by the Competitive Enterprise Institute, they estimate the total compliance costs for EPA regulations to be about \$386 billion in 2016. To put that in perspective, that's 2.1 percent of our GDP.

Do you think that the \$386 billion estimate is in the ballpark and if you don't what is your best estimate of compliance costs?

Ms. MCCABE. I really couldn't speak to that number. People do various studies. They base their studies on various assumptions that may or may not be what's actually borne out by the rule. So I really couldn't speak to that.

What I can say is that we do an evaluation for each one of our rules of the expected costs and the expected benefits associated with it.

Mr. KINZINGER. Would you agree that when a manufacturer faces a new compliance cost—let's say it's not \$386 billion if you don't think so, or whatever the number is, there's a number—do you think they have to commit resources to comply with those rules?

If a manufacturer has to comply with your rules do they have to commit some of their own resources to do it?

Ms. MCCABE. Sure. There would be expectations that they would invest in control equipment or other approaches to reduce emissions.

Mr. KINZINGER. So if a manufacturer has to devote resources to comply with new EPA rules they have fewer resources available to produce or expand production of goods and services unless they increase prices?

Ms. MCCABE. Well, I don't know that it's as simple as that, and our rules always look at what kinds of approaches are cost effective and the impact that they would have, and in fact many industries have grown over the years with making investments in cleaner technology.

Mr. KINZINGER. How does the EPA examine the impact of higher prices for goods and services? So, I mean, obviously we can go back and forth on, you know, whether it's good, bad, indifferent.

But we admit and we understand that there is some level of resources that a manufacturer will have to commit, which is less invested in expanding or promoting goods.

How does the EPA examine the impact of higher prices for goods and services or less expansion throughout the whole economy as a result? Do you guys take that into account?

Ms. MCCABE. So we follow OMB directives and methodologies in looking at our economic evaluations. Not everything has tools available to look at the impacts and so we work with OMB and others to continually develop better tools for that.

Mr. KINZINGER. Mullin, you have to sit back.

Ms. MCCABE. So that's how we do it. Right now, there aren't good tools that you could accurately do whole economy modeling such as you described.

Mr. KINZINGER. So you're saying that there is not—basically, the second and third order of facts is not taken into account. So, you know, basically cost of—if the manufacturer has to invest what they are not going to grow by that's not taken into account by those models?

Ms. MCCABE. Or how much they are going to grow and be able invest more because it's been—it's good for their business.

Mr. KINZINGER. And for the EPA rule setting carbon dioxide standards in the new coal plants did the EPA consult with equipment vendors or contractors to determine if a plant could be built with carbon capture and storage technology to meet new standards?

Ms. MCCABE. We certainly consult with a whole variety of people in the industry.

Mr. KINZINGER. And can you identify any of the vendors that made those assurances and if not, why not?

Ms. McCABE. I'd be happy to get back with you—to you with more details on who we spoke to.

Mr. KINZINGER. OK. But you will be able to do that then? We will count on that response.

Ms. McCABE. Sure.

Mr. KINZINGER. OK. And for the existing coal plant rule, EPA set emission standards that are impossible to achieve at units themselves and will require beyond the fence actions. Is there any coal-fired electric generating unit in the world that can meet carbon dioxide emissions rate that the Agency has set for existing power plants?

Ms. McCABE. Through its own—the coal emissions?

Mr. KINZINGER. Yes.

Ms. McCABE. Themselves? No, I don't believe so. But there are technologies and techniques that they can use in order to reduce their emissions.

Mr. KINZINGER. And these would be the beyond the fence actions?

Ms. McCABE. Well, CCS would be one way that a coal plant—fuel mixing is another way that they could reduce their emissions.

Mr. KINZINGER. So the next question and my last one, is there any control equipment or work practice that exists today that would allow an existing coal-fired unit to meet the standard? You think—you say there is.

Ms. McCABE. Yes.

Mr. KINZINGER. OK. All right. Well, it will be interesting.

With that, I yield back. Thank you.

Mr. WHITFIELD. At this time I will recognize the gentleman from Ohio, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman, and Ms. McCabe, thanks for joining us today. You know, the Congressional Budget Office has stated that if we increase the costs of energy it increases the cost of goods and services, costs which fall disproportionately on low-income households like those that I represent in eastern and southeastern Ohio.

You previously testified that the Agency did not assess the full economy wide impacts of the Clean Power Plan. So is EPA currently using economy wide modeling to estimate the full economy impacts of its rules?

Ms. McCABE. We don't have tools available to do that kind of analysis.

Mr. JOHNSON. But the law requires you to do that kind of analysis, doesn't it?

Ms. McCABE. Whole economy modeling? I don't believe so, sir. The law requires—

Mr. JOHNSON. Aren't you—aren't you supposed to consider the economic impacts of the—of the rules that you put out? I think that's what I heard just a little bit ago.

Ms. McCABE. In accordance with the methodologies that the Office of Management and Budget sets forth and we follow those procedures and—

Mr. JOHNSON. But I thought I understood just a little bit ago that you're not following those procedures either.

Ms. McCABE. No, we are.

Mr. JOHNSON. OK. Don't you think that the EPA should consider those full economy impacts?

Ms. MCCABE. I think these are very, very complicated issues.

Mr. JOHNSON. Oh, yes. They are complicated. The rules are complicated. The regulations that you guys are putting out are complicated. It's draining the life blood out of our—out of our businesses.

Between the Clean Power Plan, the Waters of the U.S. and others that you folks have gotten, you just heard from my colleague, Mr. Kinzinger from Illinois, the hundreds of billions of dollars that you guys are sucking out of our economy every year that could be going toward job creation.

You know, the money that is coming out in Federal regulations, particularly from the EPA, is like a—like a dadgum permission slip to do business in America. Doesn't produce a product, doesn't pay a salary. It doesn't go to any company's bottom line. It's like going to the movie theater and buying a ticket but you don't get the popcorn or the diet Coke.

You've got to pay extra to get that stuff and the projector doesn't work. It's a ripoff of the American people, and the Federal courts have shown and have demonstrated through their rulings that you guys are consistently overreaching.

I think it's absurd. I think it's irresponsible. Quite honestly, Ms. McCabe, I think it's un-American. You obviously don't have a concern and your department doesn't have a concern for the economic well-being of the very people that create jobs in this country.

Let me ask you another question. Is it correct that the EPA will not engage the Clean Air Scientific Advisory Committee to consider adverse effects of implementing air quality standards?

Ms. MCCABE. It's not correct that we will not. We—

Mr. JOHNSON. Have you done so?

Ms. MCCABE. We—

Mr. JOHNSON. Have you done so? Yes or no.

Ms. MCCABE. Not in the context—

Mr. JOHNSON. OK. So you haven't. So why not? Why not up until now?

Ms. MCCABE. The Clean Air Science Advisory Committee has focused its attention on the standards, on the standard setting.

Mr. JOHNSON. No, I'm asking you. I know what they do. I am asking you why you haven't consulted with them—why you haven't engaged with them.

Ms. MCCABE. We engage with them all the time.

Mr. JOHNSON. No. You just told me you didn't engage with them, that you haven't up until now. So first you say you didn't, now you say you did. That's the same kind of double talk that our businesses are getting across the country. Have you engaged with the CASAC?

Ms. MCCABE. We have—

Mr. JOHNSON. Have you engaged with the CASAC—

Ms. MCCABE. I am trying to answer you, Congressman.

Mr. JOHNSON. No, you are not. It is a yes or no question. Have you engaged with them?

Ms. MCCABE. Yes, we have engaged with them.

Mr. JOHNSON. Why did you just tell me that you haven't?

Ms. McCABE. Because——

Mr. JOHNSON. You said not up until now.

Ms. McCABE. Because you asked me about a specific topic.

Mr. JOHNSON. No, I asked you is it correct that the EPA will not engage with the Clean Air Scientific Advisory Committee to consider the adverse effects of implementing air quality standards. You said it's not true. I said, "Have you engaged with them?" You said not at this time.

Ms. McCABE. Not on that topic.

Mr. JOHNSON. OK. Well, that's what I am asking you about.

Ms. McCABE. All right.

Mr. JOHNSON. That's why I don't let you ramble on because you try to deflect the answer to something that you want to talk about instead of what the American people are concerned about, why you are not doing your job and why you are not considering the implications of the rules that you're putting out.

Is it correct that the EPA does not believe it has to investigate jobs losses pursuant to Section 321 of the Clean Air Act? Do you think you're supposed to do that?

Ms. McCABE. As I noted——

Mr. JOHNSON. Yes or no? Do you think you are supposed to do that? I got six seconds. Do you think you're supposed to do that?

Ms. McCABE. This is a matter in litigation, Congressman. So——

Mr. JOHNSON. So due to a matter that is in litigation, you can't answer whether or not you are supposed to do that?

Ms. McCABE. We believe that we are discharging our duties under the Clean Air Act.

Mr. JOHNSON. Are you required to investigate jobs losses under Section 321?

Ms. McCABE. The statute speaks for itself and says what it says, and we're ——

Mr. JOHNSON. And you are not doing it. It's absurd, Ms. McCabe.

Mr. RUSH. Gentleman, order.

Mr. WHITFIELD. Gentleman's time has expired. At this time, I recognize the gentleman from New York, Mr. Engel, for 5 minutes.

Mr. ENGEL. Thank you. Acting Assistant Administrator McCabe, thank you for joining us. I am a little taken aback by the hostility that I hear in this room. I just want you to know that there are many of us who approve of the work that the EPA does.

Mr. JOHNSON. Point of personal privilege, Mr. Chairman.

Mr. ENGEL. We want—we want—we want clean air.

Mr. WHITFIELD. Would the gentleman suspend for just 1 minute?

Mr. ENGEL. Yes.

Mr. JOHNSON. You know, I find it absurd that we would be challenged on an air of hostility when we are doing what the American people require us and request us to do, which is to hold the EPA accountable.

If we are not going to do it then who is going to do it?

Mr. RUSH. Mr. Chairman—Mr. Chairman—Mr. Chairman—Mr. Chairman.

Mr. JOHNSON. I have the floor. I have been recognized.

Mr. ENGEL. You took my time.

Mr. JOHNSON. Though I claim back my time. His time was over.

Mr. WHITFIELD. OK. Let's hold it for just a minute. Obviously, climate change and regulations are something we all feel very strongly about, and I don't think it's correct to question anyone's motives.

And we all have very strong feelings about this. Mr. Johnson is speaking in defense of his constituents. Mr. Engel is expressing what he perceives as hostility. What would the gentleman like to say?

Mr. RUSH. Mr. Chairman, my side has sat here very patiently and calmly while this witness, who by every indication has worked tirelessly on behalf of the American people—to be called un-American, that is absurd.

Mr. WHITFIELD. Well, Mr. Rush—

Mr. RUSH. That is extreme and I said it to you when it was mentioned, if you don't agree with the facts, then all of a sudden you are called un-American.

Mr. Chairman, there is no place in this hearing for a witness, be it from the EPA or whatever governmental agency there is to be called an un-American.

Mr. WHITFIELD. He said it was in his opinion un-American. He didn't say she was un-American. And there are very strong feelings on this issue because many people, and we are speaking for our constituents, believe that EPA is exceeding its legal authority under the direction of a president who is trying to impose his will on climate change around the world. So there are strong feelings on the issue, there is no question.

Mr. Engel, you are recognized. We will give you—you were about 4 minutes when we interrupted you.

Mr. ENGEL. I think it was more than 4, Mr. Chairman. I would like to have my 5 minutes. I really just—

Mr. WHITFIELD. Well, I would be happy to give you 5 minutes.

Mr. ENGEL [continuing]. Say anything except welcome the witness and—

Mr. WHITFIELD. You are recognized for 5 minutes.

Mr. ENGEL [continuing]. Let me say that I am not questioning anyone's motives. Everybody has the right to express their mind. I just question the hostility that the questions are being asked. I think you can disagree with a witness. You can tear down whatever they have to say. But I am a big believer in you do it in a way that doesn't call anyone un-American and that you don't question anyone's motives.

I think that the Administrator is trying to do her job. We are trying to do our job, and I think that we can have differences of opinion and state the disagreements without being hostile. That's all I wanted to say.

I am a supporter of what you try to do with clean air and clean water. I believe the history of the Clean Air Act shows that the United States can reduce pollution while creating jobs and strengthening the economy, and your testimony and Ranking Member Rush's opening statement set forth statistics on how EPA's pollution reduction program saved lives and improved public health, particularly among children and senior citizens.

So I won't repeat that here. I'll get to my questions. I have about four of them, so if you could keep your answers brief I would appreciate it.

Many of my colleagues criticize the compliance costs of EPA's regulations. Please explain the opportunities that regulated entities and industries have to communicate concerns to regulators during the rulemaking process and please explain how those concerns are taken into account.

Ms. MCCABE. Both before we start the rulemaking and certainly through formal comment periods we solicit people's views on all of the information that we use to develop our rules including rules about cost.

We are constantly looking for ways to adjust the rules to provide opportunities for people to comply with them in the most cost-effective way possible.

Mr. ENGEL. Thank you. In your experience how often are major rules adopted where projected costs exceed projected benefits?

Ms. MCCABE. Where costs exceed the benefits I am not aware of any that I've worked on where the costs exceeded the benefits.

Mr. ENGEL. Thank you. The U.S. has become a world leader in pollution control technology supporting millions of jobs, generating hundreds of billions of dollars in revenues and tens of billions of dollars in exports every year.

Has the Clean Air Act contributed to the development of that industry here in the United States?

Ms. MCCABE. Yes, sir, it has through our automotive technologies as well as other pollution control technologies. It absolutely has.

Mr. ENGEL. Thank you. The EPA and the National Highway Safety and Transportation Agency have proposed new vehicular fuel efficiency standards that establish average fleet one standards of 40.1 miles per gallon by model year 2021 and 49.6 MPGs by model year 2025. If possible, please discuss the cost benefit consideration associated with this proposal.

Ms. MCCABE. So this proposal is great because it means American motorists are using less gas. That means they are pumping less. They are saving that money in their pockets and everybody appreciates that.

Mr. ENGEL. Thank you. On August 8th of 2011, EPA finalized a cross-State air pollution rule and after a series of court challenges that delayed implementation I understand that the EPA now expects to update and finalize the rule by next month, August 2016. If possible, could you please discuss the cost benefit considerations associated with this rule making?

Ms. MCCABE. Yes, sir. Absolutely.

This is a rule that's required for upwind States to reduce their emissions that contribute to ozone air quality problems downwind.

We reviewed the variety of technologies that are available to electric utilities to reduce those emissions of NOx and found a number of extremely cost effective approaches—\$1,500 per ton or less—that could be implemented very quickly including turning on pollution control technology that has been installed but is not being run at this time.

Mr. ENGEL. Thank you. On June 22nd, 2010, EPA finalized a rule which strengthens the primary sulfur dioxide NAAQS to a level of 75 parts per billion. Principal effects would be to require additional controls on fossil fuel-fired power plants. If possible, could you please discuss the cost benefit considerations associated with this rule making?

Ms. MCCABE. So sulfur dioxide has very clear impacts on public health. So every time you reduce sulfur dioxide you are achieving benefits that can be monetized in terms of people's public health.

There are very well understood technologies, very cost effective technologies that are available for facilities to reduce their emissions of SO₂ and I should note that those very same kinds of technologies are helpful in meeting other requirements.

Mr. ENGEL. Well, again, thank you for your testimony and I appreciate the work you do and sorry that you weren't treated very courteously.

Ms. MCCABE. Thank you, sir.

Mr. WHITFIELD. At this time, I recognize the gentleman from Oklahoma, Mr. Mullin, for 5 minutes.

Mr. MULLIN. Thank you, Mr. Chairman. Thank you once again for being here. I don't envy your position and unfortunately I have lost a tremendous amount of respect for the EPA and what their mission statement has turned into.

From trying to protect our environment, which I'm a big advocate for—I am the fourth generation on my farm. We live in the same location that, literally, my family stopped walking because I'm Cherokee and when we came into Oklahoma, still live in the same area. Love it.

And so we're about protecting it. My kids will grow up on the same place. But the EPA has turned into more of an agenda-driven agency than actually doing its original mission statement as you stated earlier.

And I just want to kind of rehash some things. I mean, you have—you have said that you believe that energy costs is going to be lower due to the EPA's regulation. Is that correct?

Ms. MCCABE. What I was referring to was our projections in the Clean Power Plan, that by the 2030 compliance year because of the investment in energy efficiency that we predicted that people's bills would go down by about 7 percent.

Mr. MULLIN. So out of those Clean Power Plans, there are several regulations specifically to the power plants and by fully implementing all of those out of 16 rules it's going to cost the industry—now, this is where you are saying it's going to lower costs to our consumers—by the time all of these 16 rules are fully implemented it's going to cost the industry \$28,912,000,000 a year annually to comply—annually. Now, who's going to pay for that?

Ms. MCCABE. Well, I'm not sure where your number comes from, Congressman, so—

Mr. MULLIN. This is from you guys. EPA's estimate of compliance cost—EPA's—these are yours—so this isn't my number. This isn't the majority's number. These are your numbers. The 16 rules that you have towards power plants, \$28,912,000,000 annually—your numbers—to comply. Now, where is the cost saving to the consumer? Who is going to pay for that?

Ms. McCABE. This is a very large industry. The utility industry—

Mr. MULLIN. No, no, no, no. Who is going to pay the \$28 billion? Let us just round it up to \$29 billion because you guys usually underestimate because you want to try and make your numbers look good. So let's say \$29 billion annually. Who is going to pay for that?

Ms. McCABE. What I am trying to say, Congressman, is that consumers pay rates which are set through—

Mr. MULLIN. So what you're saying is you expect the industry to absorb it?

Ms. McCABE. I am not saying any—I am not giving you any—

Mr. MULLIN. Well, now, you made the claim that the consumers' cost was going to go down.

Ms. McCABE. Yes, sir.

Mr. MULLIN. OK. How are you coming up with that claim if you can't answer who is going to pay for the \$29 billion that you guys estimate it is going to cost annually to comply with your regulations?

Ms. McCABE. This industry invests every year millions and millions of dollars—

Mr. MULLIN. This is—no, no, no. This has nothing to do with investment. This has to do with complying with your regulations.

Ms. McCABE. Respectfully, Congressman, it does have to do with investment.

Mr. MULLIN. No. No, it doesn't. This is to comply.

Ms. McCABE. Yes, and they're—

Mr. MULLIN. There is a huge difference. I am a business owner. There is a cost to implement every regulation that comes in. That has to either be absorbed by the company, which can't usually absorb it, or it's got to be passed on to the consumer.

Now, if you are going to sit here and tell me as a witness that it is going to lower the cost, you are telling the American people that it is going to lower the cost but your estimates—your estimates are saying it's going to cost \$29 billion annually for the industry to comply and your only answer is that it is going to be absorbed by the industry? You are making that assumption?

Ms. McCABE. The increased use of energy efficiency will mean that people are using less energy.

Mr. MULLIN. Now, the last time you were here I went through energy efficiency that you guys were claiming and we didn't show that. The cost of the compliance of the appliances had went up and greatly outpaced the cost of energy savings. So now you are saying that it's going to save it because of energy savings. So you're making an assumption—you are making a false claim then?

Ms. McCABE. I am not making a false claim.

Mr. MULLIN. No, you are saying that it is going to save the consumer dollars. You are making that assumption—

Ms. McCABE. I am—

Mr. MULLIN [continuing]. And so you are making a false claim because there is nothing to back that up.

Ms. McCABE. What there is to back that up is our regulatory impact analysis, which lays out all of this analysis—

Mr. MULLIN. By your own costs it's \$29 billion a year. Who is going to pay for it?

Ms. MCCABE. Sir, you need to look at the regulatory impact analysis that goes through—

Mr. MULLIN. No. What you need to do is understand the industry. I read your bio. You have never worked in the industry. You have worked against the industry from day one.

Ms. MCCABE. That is absolutely not true, Congressman.

Mr. WHITFIELD. The gentleman's time has expired.

Mr. RUSH. Mr. Chairman, a point of order. When are you going to stop the badgering of witnesses before this committee? And then I respect the prerogatives of every member of this committee—every Member of the House. I respect the witnesses. Mr. Chairman, if they're asked a question, then they should have some reasonable amount of —

Mr. WHITFIELD. Well, I didn't—it's not my opinion that Mr.—

Mr. RUSH. Mr. Chairman, please don't cut me off. At least I ask for some reasonable assurance that they are going to be able to answer the question that they are asked. Now, Mr. Chairman, this hearing is getting way out of hand and then you have to have some responsibility for it.

Mr. WHITFIELD. This hearing is not out of hand.

Mr. RUSH. Yes, the hearing is—

Mr. WHITFIELD. People have a right to ask the questions.

Mr. RUSH. This witness has been badgered and badgered—

Mr. WHITFIELD. She has not been badgered.

Mr. RUSH [continuing]. And badgered and badgered and badgered and badgered, Mr. Chairman.

Mr. WHITFIELD. I respectfully disagree with you.

At this time, I recognize the gentleman from Missouri, Mr. Long, for 5 minutes.

Mr. LONG. Thank you, Mr. Chairman. I appreciate and I wish there was as much respect on the House floor for the activities there as what there are in this room and if you want to look at disrespectful look at last Thursday on the floor of the House—the representatives of the people's House.

Ms. McCabe, I am sure you're aware in February of this year—I moved to the chair. I can see—it's the only one I can't see—get him out of here.

But I'm sure you're aware that in February of this year the Supreme Court issued a stay on the implementation of the Clean Power Plan. The EPA has stated it will continue to provide tools and support for States that seek the Agency's guidance and just last month issued a proposed rule on design details for a program out of the Clean Power Plan.

Why does EPA continue to issue implementation guidance on the Clean Power Plan in light of the Supreme Court's stay and shouldn't the EPA stop issuing guidance for the Clean Power Plan?

Ms. MCCABE. Congressman, we are not implementing the Clean Power Plan, which is what the court stayed. No State is required to do anything under the Clean Power Plan. While that is—

Mr. LONG. But you're issuing guidance on it or not?

Ms. MCCABE. We are developing further tools in response to requests from States that are voluntarily choosing to go forward and

work on these issues and the Supreme Court did not stay all activity of the Agency. It did not stay activity of States that want to do something to address these important public health issues.

Mr. LONG. Yes, but it issued a stay on the implementation of the Clean Power Plan, correct?

Ms. MCCABE. Which we are—which we are not doing.

Mr. LONG. So you are not issuing guidance on the Clean Power Plan?

Ms. MCCABE. Developing tools is not implementing the Clean Power Plan, which is what was stayed.

Mr. LONG. What is the EPA's interpretation of the stay of the Clean Power Plan?

Ms. MCCABE. Our interpretation is that we cannot require any State to take any activity that is required under the Clean Power Plan and we are not doing that.

Mr. LONG. OK. Does EPA consider the cumulative impact of economically significant rules when proposing additional rules and if so what influence does this have on the EPA when proposing new rules or updates to current rules?

Ms. MCCABE. Each time we do a rule we take into account all the rules that have gone before it and build that into our analysis of costs and benefits.

Mr. LONG. OK. Since 2009, the EPA has published nearly 3,900 final rules—the final answer. Roughly, how many of these rules have been considered economically significant, which means they have an annual effect on the economy of \$100 million or more?

Ms. MCCABE. I don't know the answer to that question, Congressman. I would be happy to get it for you.

Mr. LONG. I didn't think you would but I was hoping you would be able to get it for me. So I—

Ms. MCCABE. Yes. Absolutely. We will gladly get it for you.

Mr. LONG. Yes, I appreciate that. And under the Paris climate agreement the United States agreed to revisit its greenhouse gas goals in 5 years with the object of making them more stringent.

Will this agreement lead the EPA to more proposed stringent standards for the power sector, you think?

Ms. MCCABE. I really can't speak to rules in the future, Congressman. But this is a global and challenging problem that people will continue to work on.

Mr. LONG. Former climate chief—excuse me, a former chief climate counsel of an environmental group recently mentioned that there could be newer versions of the Clean Power Plan if the Supreme Court rules in favor of the plan.

Is the EPA currently doing work on a more stringent version of the Clean Power Plan for power plants?

Ms. MCCABE. No, we are not.

Mr. LONG. Under Section 111, standards are to be reviewed every 8 years. Would more stringent standards be in fact a possibility?

Ms. MCCABE. That every 8-year review applies to Section 111(b), which is the standards for new power plants. So just wanted to clarify that.

But at this moment, we are not looking at any review of the 111(b) and 111(d) standards.

Mr. LONG. OK. Well, I'd feel, you know, kind of left out if I didn't get to raise my voice at least once today. So I want to thank you for being here and I yield back.

Mr. WHITFIELD. The gentleman yields back and that concludes all the questions. So Ms. McCabe, thank you for being with us this morning. We look forward to continuing working with you on these issues.

At this time, I would like to call up the second panel of witnesses, and on the second panel we have—I am actually just going to introduce the second panel as we call them for their testimony.

So if the second panel would come forward and Ms. McCabe thank you again. Our actual first witness on the second panel will be Mr. Travis Kavulla, who is the president of the National Association of Regulatory Utility Commissioners and he's the vice chairman of the Montana Public Service Commission.

So we will recognize Mr. Kavulla for his 5-minute opening statement, and just make sure that the microphone is on and you see the lights on the table. When the 5 minutes is up, the red light will come on.

So at that point, you can start summarizing. But we do appreciate all of you being with us this morning and, Mr. Kavulla, you are recognized for 5 minutes for an opening statement.

STATEMENTS OF TRAVIS KAVULLA, PRESIDENT, NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS, ON BEHALF OF THE NATIONAL ASSOCIATION OF REGULATORY COMMISSIONERS; DAVID PORTER, CHAIRMAN, RAILROAD COMMISSION OF TEXAS; LYNN D. HELMS, DIRECTOR, NORTH DAKOTA INDUSTRIAL COMMISSION, DEPARTMENT OF MINERAL RESOURCES; ROBERT WEISSMAN, PRESIDENT, PUBLIC CITIZEN; AND CHARLES D. McCONNELL, EXECUTIVE DIRECTOR, ENERGY AND ENVIRONMENT INITIATIVE, RICE UNIVERSITY

STATEMENT OF TRAVIS KAVULLA

Mr. KAVULLA. Thank you very much, Chairman Whitfield and Ranking Member Rush and members of the committee, for sitting through this hearing today and affording us your attention.

I am speaking today on behalf of the National Association of Regulatory Utility Commissioners, a 127-year-old organization that represents the public utility commissions of the United States.

I think it's safe to say that when the rule was—the Clean Power Plan was published in the Federal Register October of last year it represented the EPA's most far-reaching regulation of the electric power sector in the Agency's history.

NARUC's members are divided on what should be done to address carbon dioxide and other greenhouse gases emissions. However, NARUC has advocated unambiguously that States' traditional regulatory oversight over utility resource planning not be eroded and that low-carbon-emitting resources of all kind receive credit in the Clean Power Plan.

In both respects, the EPA's regulation falls short of these principles. Traditionally, air quality regulations identify the pollutant that they have in mind to abate and then they specify the tech-

nology which either maximally controls for its emissions or is the most cost effective in controlling the emission of a pollutant.

Then the regulation will require the installation of that technology or require the facility that emits that pollutant to limit its emissions to the same—to the same level.

In short, traditional environmental regulation revolves around installing specific pollution control technologies at the facility that produces the emissions and certainly in all previous rules issued under Section 111(d) a facility-specific technology has been at the core of the regulations emissions standard.

And if you look back at the several regulations issued under 111(d), these technologies are fairly modest in scope and limited in their applicability to certain industries—for instance, spray cross-flow packed scrubbers for the phosphate fertilizer industry.

When the EPA, however, decided to focus on electric power generation under Section 111(d), instead of focusing on the emitting facility as the—as the point of regulation, the EPA instead focused on what it called the complex machine that is the North American power system and it identified through a system of so-called building blocks a more comprehensive system to abate the emission of carbon dioxide.

The EPA then set about creating State requirements that were not limited to reducing emissions from coal-fired generators based on facility upgrades but on the idea that if only natural gas-fired or renewable generation were more prevalent coal plants would dispatch less often, reducing their emissions.

Together, the requirement-setting process leads to a more stringent emission standard for coal plants which is impossible to achieve at the specific plants using demonstrated technology.

In short, to regulate existing power plants, the EPA is effectively requiring the construction of entirely new power plants. This novel approach means that EPA has interpreted the Clean Air Act to give that agency the power essentially to plan the resource mix of the U.S. power sector.

Effectively, the EPA has created a de facto fuel and renewable energy standard. I am concerned about this because traditionally making determinations as to the economic, environmental and social efficiency of utilities' investments to serve retail customers has been for nearly a century the province of State utility commissions.

Regulated utilities that own generation file integrated resource plans that are subject to review by State utility commissions.

These are intended to be processes that take a wide ranging look at customers' needs, incorporating demand forecasting a wide consideration of available resources including energy efficiency and indeed environmental externalities.

In my experience, State utility commissions possess and deploy substantial technical resources in analyzing these plans.

But when the EPA adopted a system that encompassed the entirety of the State's electric power production what it really did was to remove the IRP function of a utility commission and replace it with a carbon resource planning process undertaken by the State's environmental regulator and the Governor's office under Section 111(d).

It may seem innocuous to transfer one regulator—an economic regulator like myself with an environmental regulator, but the functional transfer of authority is highly consequential for several reasons. It gives a less experienced regulator control over a resource planning process. It makes the resulting plan a matter of Federal environmental law enforceable under it sapping the ability of the industry and the regulator to respond nimbly to changing market conditions.

The scope of the plan, rather than just for a single utility, now becomes the entire State's electric resource mix with the likelihood that certain parties are favored over others and, finally, it introduces a new level of potentially self-seeking politics and to have a plan in process.

Needless to say, Mr. Chairman, with the adoption of the Clean Power Plan by the EPA, it fundamentally alters how and by who utilities are regulated in the United States.

Thank you.

[The prepared statement of Mr. Kavulla follows:]

BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES

COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENERGY AND POWER

TESTIMONY OF THE HONORABLE TRAVIS KAVULLA
PRESIDENT, NATIONAL ASSOCIATION OF REGULATORY UTILITY
COMMISSIONERS

ON BEHALF OF THE
NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

ON

“A Review of EPA’s Regulatory Activity During the Obama Administration: Energy and
Industrial Sectors”



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Regulatory Utility Commissioners
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Summary of the Testimony of The Honorable Travis Kavulla

The EPA's Clean Power Plan represents a truly significant realignment, for better or worse, in the paradigm of how and by whom utilities should be regulated.

In creating a regulation that essentially requires States to build new power plants in a gambit to mitigate the emissions of existing ones, the EPA has created a regulation that can be seen as a *de facto* fuel-type or renewable-energy standard.

The EPA's regulation creates a carbon planning function vested in the EPA together with the State environmental regulators and governors. This supplants the traditional oversight of utility resource planning by State utility commissions. This step change in the regulation of utilities will have many consequences, some of which are readily apparent and some of which are as yet unforeseen.

Additionally, the design of the Clean Power Plan may promote uneconomic pathways to complying with the regulation, both in States that traditionally engage in the central regulation of utilities by State commissions, and in markets where competitive forces are today relied upon for the procurement and dispatch of those resources.

Good morning Chairman Whitfield, Ranking Member Rush, and Members of the House Committee on Energy and Commerce, Subcommittee on Energy and Power. My name is Travis Kavulla and I have the honor of serving as the President of the National Association of Regulatory Utility Commissioners (NARUC). It is always a privilege to testify before this committee.

NARUC is a quasi-governmental, non-profit organization founded in 1889. Our membership includes the public utility commissions serving all States and territories. NARUC's mission is to serve the public interest by improving the quality and effectiveness of public utility regulation. Our members regulate the retail rates and services of electric, gas, water, and telephone utilities. We are obligated under the laws of our respective States to assure the establishment and maintenance of such utility services as may be required by the public convenience and necessity and to assure that such services are provided under rates and subject to terms and conditions of service that are just, reasonable, and non-discriminatory.

On October 23, 2015, the Environmental Protection Agency published in the Federal Register the most far-reaching regulation of the electric power sector in the agency's history: the Clean Power Plan.¹ The plan targets sharp reductions in carbon-dioxide emissions from existing plants.

NARUC's members are divided on what should be done to address carbon-dioxide and other greenhouse gas emissions. The association's limited official statements on the plan reflect that division. However, NARUC has advocated unambiguously that States' traditional regulatory oversight over utility resource planning not be eroded and that low-carbon-emitting resources receive credit in the Clean Power Plan. The EPA's regulation falls short of both of those, especially

¹ 40 CFR Part 60, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units: Final Rule*, 80 Federal Register 64661 (October 23, 2015).

the first. I elaborate on these arguments in my written statement, occasionally making arguments that represent my views, and not necessarily those of my association as a whole. However, whatever else one believes the Clean Power Plan will do, it represents a marked change in how and by whom utility regulation in the United States is conducted.

The Clean Power Plan Overtakes State Commissions' Role in Utility Regulation

Until the Clean Power Plan, environmental regulations issued under the Clean Air Act have been straightforward, if sometimes controversial. They identify the pollutant that should be abated. They specify the technology which either maximally controls or is most cost-effective in controlling the emission of that pollutant. Then they require the installation of that technology onto a particular power plant or the shut-down of a plant as non-compliant. They also can provide the option to sell or transfer emission allowances to those that have over-complied with the standard. Those plants can transfer their un-used “compliance” or allowances to plants that cannot comply directly with the emission limits imposed.

In short, traditional environmental regulation revolves around installing specific pollution control technologies at the facility that produces the emissions. Certainly, in all previous rules issued under Clean Air Act (CAA) §111(d), which has as its premise the identification of a “best *system* of emissions reduction,” a facility-specific technology has been at the core of the regulation’s emission standard. This has ranged from the “spray cross-flow packed scrubbers” identified for phosphate fertilizer plants to the dry or wet scrubbers to remove fluoride at aluminum plants.²

² In total, there have been only five valid regulations issued under this section of the CAA since the 1970s, and they have been limited to more narrow industries than the entirety of the electric power sector; specifically, they address phosphate fertilizer and aluminum plants mentioned above, as well as kraft pulp mills, sulfuric acid production units, and municipal solid waste landfills. Brief for *Amici Curiae* Former State Public Utility Commissioners, *State of West Virginia, et. al. v. EPA*, Case No. 15-1363, (Feb. 23, 2016), p. 4.

The Clean Power Plan is a departure from this traditional analysis. Instead of focusing on the emitting facility, the EPA instead focuses on “the complex machine” that is “the North American power system.”³

The EPA then set about creating state requirements that were not limited to reducing emissions from coal-fired generators based on facility upgrades, but on the idea that if only natural gas-fired or renewable generation were more prevalent, coal plants would dispatch less often, reducing their emissions. Together, these so-called “building blocks” of the EPA’s requirement-setting process lead to an enhanced emissions standard for coal plants that is impossible to achieve at the specific plants. For several states, the natural-gas and renewable resources necessary to obtain the reductions required by the Clean Power Plan do not even exist.⁴ In short, to regulate existing power plants, the EPA is effectively requiring the construction of *entirely new* generating resources.

This novel approach means that EPA has interpreted the Clean Air Act to give that agency the power, essentially, to plan the resource mix of the U.S. power sector. Effectively, the EPA has created a *de facto* fuel and renewable energy standard.

While the EPA contends States may meet their carbon-dioxide emissions requirements in ways other than by the assumptions the EPA used to set those targets, there are only a limited number of tools to do so. As such I expect that most States will do more or less what the EPA, in its resource-planning exercise, has spelled out as the regulation’s “best system of emissions reduction.” This is especially the case since the EPA, despite its promise of flexibility, has actually

³ *Id.*, citing 80 Fed. Reg. 64,725-64,726 (Oct. 23, 2015).

⁴ One such example is Alabama, which, even were it to increase to output of its existing gas-fired generators to the dispatch rate assumed in the EPA rule, would nonetheless have to build new renewable generation to displace a sufficient amount of coal-fired production to meet the EPA requirement. *See* William S. Scherman & Jason J. Fleischer, “The Environmental Protection Agency and the Clean Power Plan: A Paradigm Shift in Energy Regulation Away from Energy Regulators,” 36 *Energy Law Journal* 355 (2015), p. 384.

precluded States from obtaining credit for certain carbon-abating activities, as discussed at greater length below.

NARUC called upon the EPA at the outset of this rulemaking to “not intrude on the States’ jurisdiction over decisions regarding integrated resource planning and/or resource adequacy or otherwise mandate specific modifications to the mix of fuels and resources in existing or future State generation portfolios.”⁵ NARUC is a 127-year-old organization, and making determinations as to the economic, environmental, and social efficiency of utilities’ investments to serve retail customers has been, for just as long, the province of State utility commissions.⁶ The importance of this State planning expertise is not merely an opinion. It is the foundation of the long-standing legal framework of our country’s electric power sector, which establishes a bright line between the federal and State jurisdiction over generation of electrical energy.⁷ While my association has periodically disagreed with the Federal Energy Regulatory Commission—our counterpart, on oversight of the power sector—that agency’s actions have usually been undertaken in a spirit of cooperative federalism. The same cannot necessarily be said of the EPA. While the agency deserves credit for its outreach to State utility commissions, it has through the Clean Power Plan largely supplanted them as the institution responsible for determining what resource mix best serves the public interest.

⁵ “Resolution on Increased Flexibility with Regard to the EPA’s Regulation of Greenhouse Gas Emissions from Existing Power Plants,” Adopted by the NARUC Board of Directors (Nov. 19, 2013) and the Committee of the Whole (Nov. 20, 2013). Available online at: <http://pubs.naruc.org/pub/53A0C721-2354-D714-5119-A6E9EFD6F5BE> (all hyperlinks last accessed July 1, 2016).

⁶ The only exception to this rule is where a state has chosen consciously to “restructure” their utility industry, in order to remove the cost-recovery of generation from the state-regulatory process and have it be competitively procured in the open market. (Even in this situation, states retain responsibility for the siting of those power plants.) The EPA regulation poses perhaps an equal number of problems with respect to that approach, which are touched upon later.

⁷ Federal jurisdiction was asserted only after utilities got their start, and states began to regulate them as monopolies. When federal legislation occurred, the adoption of the Federal Power Act specifically excluded the federal regulator the jurisdiction “over facilities used for the generation of electric energy.” 16 U.S.C. § 824(b).

The EPA's reach into State resource planning ignores much of what States have done over the years to address the very problem EPA seeks to redress. Three decades ago, States began to adopt more specific statutes which, rather than simply directing State utility commissions to engage in after-the-fact review of utility generation investments, called on regulated utilities to file Integrated Resource Plans (IRPs) subject to review by State utility commissions. These were intended to be processes that took a more perspicacious view of customers' needs, incorporating better demand forecasting, a wider consideration of available resources including energy efficiency, and, indeed, environmental externalities. States of all political stripes adopted such programs, either through legislation or regulation.⁸ Generation-owning utilities, pursuant to these State requirements, typically file every other or every third year a plan to satisfy those multiple requirements, using resource-acquisition and production-cost models to determine an optimal portfolio to supply their customers. The State utility commission then becomes a one-stop shop for consumers and other stakeholders to participate in the vetting of this plan, which informs utilities' actions into the future. In my experience, State utility commissions possess and deploy substantial technical resources in analyzing these plans. They take seriously their mandate to analyze these monopoly plans to serve customers who do not have another choice in provider.

Were the environmental obligation in question here—the reduction of carbon-dioxide emissions—to be expressed as a facility-specific technology or even simply as an explicit carbon price, then those inputs could be modeled transparently within the IRP process that is used to

⁸ For example, in my home state, in 1993, the legislature adopted the *Montana Integrated Least-Cost Resource Planning and Acquisition Act* (1993), codified at Mont. Code Ann. Title 69, Ch. 3, Part 12. It calls for “efficient utility operations, efficient use of utility services, and efficient rates” as well as the “acquisition of] resources in a manner that will help ensure a clean, healthful, safe and economically productive environment.” MCA §69-3-1202(1).

identify the least-cost portfolio within the bounds of other restrictions, such as reliability or environmental impact.

This would still leave the State to determine whether the additional capital expense of a pollution control technology, or the operating expense of a carbon price, would be worth the continued benefit of its production, when compared to other generation alternatives. Yet when the EPA adopted a “system” that encompassed the entirety of the State’s electric power production, what it really did was usurp the IRP function of a utility commission and replace it with a carbon-resource planning process undertaken by the State environmental regulator and governor’s office under the Clean Air Act’s §111(d).⁹

The Erosion of State Commissions’ Role has Negative Consequences

It may seem innocuous to hand over functions of the State utility commission to the State environmental regulator—but the functional transfer of authority is highly consequential for several reasons:

- It gives a less experienced regulator control over a resource planning process;
- It makes the resulting plan enforceable as a matter of federal environmental law, sapping the ability of the industry and the regulator to respond nimbly to changing market conditions;
- The scope of the plan, rather than just for a single utility, now becomes the entire State’s electric resource mix, with the likelihood that certain parties are favored over others; and
- It introduces a new level of potentially self-seeking politics into the planning process.

⁹ All states empower their state equivalent of the EPA, and not a utility commission, to create state plans under the Clean Air Act, and it is the legal responsibility, in the end, of a governor to submit a state plan under CAA §111(d). 40 CFR part 51 App. V.2.1.(a) 80 Federal Register at 64856 (October 23, 2015).

State environmental regulators are gifted at what they do, and as a utility commissioner, I would have to look to them, for instance, on an explanation of how dry sorbent injection works to remove harmful metals from the industrial processes of a power plant. Yet those regulators, like the EPA, do not have a wide knowledge of how the electric system as a whole is planned for, operated, and paid for. I have personally talked to a number of State environmental regulators who have expressed confusion as to how utility planning is conducted, and apprehension about being in the driver's seat conducting it. One of them told me, "It was simple when we were just being asked to identify an emissions rate for a power plant and make them responsible for meeting that rate." Now, that regulator will be asked, if the State agency follows EPA's identified "best system of emissions reduction," to engage in a central planning exercise that ordains the amount of renewables, natural gas, coal, and other resources to be part of his or her State's energy mix.

Moreover, the stakes are much higher. A poor job on a utility's IRP might result in a financial disallowance and more prescriptive instructions on what to do in the wake of unsatisfactory utility decision-making. A State §111(d) plan, once approved by the EPA, is legally enforceable as a matter of federal law.¹⁰ This designation affords significantly less room for the errors that inevitably occur in something as complex as electric resource planning.

These plans, indeed, are much more complex because rather than being about the compact between one monopoly utility and its customers, they will be about the entire State's carbon emissions profile. Two years ago, I testified before this subcommittee that the EPA appears to assume that simply because two power plants were in the same State, their operation must be

¹⁰ Under Section 113, EPA may initiate an enforcement action against "any person" (including a State) that has violated a specific requirement or prohibition of a State plan or permit. 42 U.S.C. § 7413(a)(1),(b). This provision makes a requirement or prohibition in a State plan or permit "federally enforceable."

seamlessly interrelated.¹¹ Such misunderstandings remain in the final regulation, and will no doubt be replicated in many State plans. The result? Smaller utilities and their customers may be overlooked and subject to unintended consequences amidst the overarching State §111(d) plan, because of an inevitable regulatory focus on larger players.

Finally, there are the politics endemic in this gambit. State commissions are not above the fray. But they are also not primarily responsible, as governors are for instance, for promoting the creation of jobs and economic development in their State. Instead, my job—as an economic regulator—is to simulate the outcome of what a competitive market might create for the power sector in light of the nature of Montana’s electric sector as primarily a retail monopoly. That means, while I care about jobs, the primary focus is just and reasonable rates which are the product of least-cost decision-making once consideration is given (and additional costs are incurred) for legally required expenditures on environmental and reliability considerations. Every governor, in my experience, has some kind of “energy jobs plan.” It will be a temptation to take such a plan off the shelf—even if it has been rejected by the State’s legislature or utility commission—and make certain modifications necessary to truss it up as a State plan acceptable under the federal Clean Power Plan, and then submit it to the EPA.¹² Once approved, it will—again—be enforceable as a matter of federal law, having offered one part of a State’s political establishment an opportunity for an end-run around the whole.

¹¹ Written Testimony of Commissioner Travis Kavulla, Before the Committee on Energy and Commerce’s Subcommittee on Energy and Power, “State Perspectives: Questions Concerning EPA’s Proposed Clean Power Plan,” (Sept. 9, 2014), pp. 8-10. Available online at: <http://psc.mt.gov/commissioners/District1/pdf/Testimony%20before%20House%20Power%20and%20Energy%20Subcommittee%20on%20EPA%20Carbon%20Rules.pdf>

¹² EPA, meanwhile, has no meaningful obligation—as would be a state utility commission—to review these plans for their economic efficiency. It cares only about compliance with the emissions standard. Moreover, the EPA has even seemingly identified that their regulation is more appetizing when cloaked in rhetoric about “jobs” and “investment,” which fact sheets from the agency regularly extol. *See, e.g.*, <https://www.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-clean-energy-now-and-future>

Meanwhile, regulated utilities may even cheer an economically inefficient plan, because it gives them the opportunity to grow their “rate base.”¹³ Such utilities will present those costs not as the product of an IRP’s least-cost evaluation, but as the fixtures of a legally binding carbon §111(d) plan. This puts State commissions in the impossible position of not being able to deny recovery of those costs—even if they do not appear to have been the most efficient path to complying with the environmental regulation—because those investments were nonetheless the requirement of a federally approved, State carbon resource plan.

As a number of former utility commissioners have observed, “PUCs do retain a sole, ministerial function: These regulators get to present the bill to ratepayers for costs incurred to satisfy EPA’s Power Plan.”¹⁴

My concern with this framework is that it erodes the independence and data-driven nature of decision-making which is the aspiration and hopefully the practice of State commissions. In Montana, as in several other States, public service Commissioners, like Congressional representatives, are elected. Presumably, Montana and those other States decided to elect their utility regulators to further insulate the State commission from political influence by the governor or individual legislators on matters of utility regulation. The Clean Power plan up-ends that framework.

The Clean Power Plan Complicates Efforts to Introduce Competition into Electric Markets

Starting in the late 1990s, other States, particularly in the Eastern United States, made the choice to open retail electric markets to competition. This usually involved requiring regulated utilities to divest their generation assets to unregulated affiliates or other firms, allowing customers

¹³ “Rate Base” is the total amount of invested capital upon which a regulated firm is allowed to make a return through the rates approved by a utility commission.

¹⁴ *Amici*, p. 28.

to choose a retail supply provider, and establishing, under FERC's supervision, a wholesale market where through a security constrained economic bidding process the newly competitive generators earn market-based revenues (in addition to whatever other deals they may obtain from the downstream competitive providers).

Those States have largely written their IRP function out of existence, because regulated utilities no longer have monopolies over customers, and no longer own generation which is paid by those captive sets of customers.

Ironically, the Clean Power Plan may re-introduce a central planning function to some of these States. There is very little in the EPA regulation limiting how highly prescriptive a §111(d) plan could be in terms of ordaining the construction of this or that resource. Picking winners and losers is something that sound, technologically neutral public policy eschews. Yet it is not forbidden by the Clean Power Plan, which does not require technological neutrality in the obtainment of its carbon-reduction goals. Again, it may allow a governor to override through the submission of a §111(d) plan the competitive framework enacted by those States' legislative processes.

This is not an academic issue. A number of States and FERC have been engaged lately in litigation on this matter. The disputes have focused on whether States' attempts to inject new generation into restructured, competitive markets for generation, through State-based planning or the retail ratemaking process, distorts the market and is thus pre-empted by the Federal Power Act's grant of exclusive jurisdiction over the "sale for resale" of electricity to FERC.¹⁵ One recent attempt by the State of Maryland was found unlawful in the U.S. Supreme Court's latest term, in

¹⁵ Under the Federal Power Act, FERC has exclusive authority to regulate "the sale of electric energy at wholesale in interstate commerce." 16 U.S.C. § 824(b)(1). A wholesale sale is defined as a "sale of electric energy to any person for resale." 16 U.S.C. § 824(d).

which the majority noted that a State might “encourag[e] production of new or clean generation through measures ‘untethered to a generator’s wholesale market participation.’”¹⁶ In a re-match where the FPA and FERC are pitted against a State §111(d) plan cloaked in EPA approval, which will win?

Those who have championed competition are worried about the “slippery slope towards unraveling the market design.”¹⁷ The Clean Power Plan threatens competition in electric markets because it is more likely than not that whatever the States do to comply with the regulation, it will not be solely an explicit price on carbon or cap-and-trade regime that could be reconciled to these markets.

Even the EPA has accorded certain carbon-abating resources favorable treatment, while not doing so for others. Nuclear plants whose owners must decide whether to extend their licenses, for instance, would receive no credit under the EPA’s calculations for their continued contributions to carbon-emissions abatement. This has led former Energy Secretary Steven Chu to criticize the Clean Power Plan in the past month, arguing, “We should make a Clean Power Plan that’s based on clean energy, not renewable energy.”¹⁸ The regulation falls short of what NARUC asked of the agency in November 2014, providing credit to States for preserving or extending the life of the nuclear fleet.¹⁹ In other words, even the EPA has not adopted the economically efficient premise that carbon-abating resources should be treated in a technologically neutral manner. States will

¹⁶ *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1299 (2016).

¹⁷ William W. Hogan, “Electricity Markets and the Clean Power Plan,” *Electricity Journal* (Nov. 2015), p. 23.

¹⁸ Jeff McMahon, “Steven Chu Criticizes Clean Power Plan for Neglecting Nuclear,” *Forbes* (June 5, 2016), <http://www.forbes.com/sites/jeffmcmahon/2016/06/05/steven-chu-criticizes-clean-power-plan-for-neglecting-nuclear/#43cb0fb7f35>

¹⁹ *Resolution Recognizing the Importance of Nuclear Power in Meeting Greenhouse Gas Goals*, Adopted by the NARUC Board of Directors (Nov. 18, 2014) and the Committee of the Whole (Nov. 19, 2014), available at: <http://pubs.naruc.org/pub/53A0D13B-2354-D714-51BF-BC0BB4BE2E06>

necessarily reflect the EPA's distortion in their plans. Moreover, it is likely State §111(d) plans will add similar distortions. The implementation of the Clean Power Plan probably will have the semblance of a political compromise that involves creating a carbon resource plan where politically favored power plants are brought online either through a direct mandate of a State plan, or in exchange for Emissions Reductions Credits or similar instruments created by regulatory fiat and which other generators are required to obtain. The production of those new power plants then will increase supply in the competitive markets, suppressing the market clearing prices that all resources rely upon for their continuing operations, including other clean energy resources that were previously constructed but which do not obtain credit from the EPA for Clean Power Plan compliance.

If this *sounds* complicated, let me assure the subcommittee: *It is*.

It is so complicated that the EPA appears merely to hope that it will not be a grave problem; the agency has offered little in the way of meaningful guidance of how this environmental regulation, which has a central planning notion at its fundament, can be reconciled to the restructured markets for electricity. Indeed, of nine possible ways to incorporate the Clean Power Plan into the competitive wholesale markets, seven of them are faulted by Prof. William Hogan, an expert on market design, for having a variety of ill effects from reducing the efficiency of dispatch to threatening reliability to undoing the competitive project altogether.²⁰

Conclusion

The point I would like to leave the subcommittee with is this: There have been ups and downs to the role and responsibilities of State utility commissions over the past century. But the

²⁰ The two workable options that Prof. Hogan identifies are a carbon tax or a cap-and-trade program. *Hogan*, pp. 23-29.

Clean Power Plan represents a truly significant realignment, for better or worse, in the paradigm of how and by whom utilities should be regulated.

The design of the Clean Power Plan may promote uneconomic pathways to complying with the regulation, both in States that traditionally engage in the central regulation of utilities by State commissions, and in markets where competitive forces are relied upon for the procurement and dispatch of those resources.

Thank you again for the subcommittee's invitation to be here today.

Mr. WHITFIELD. Thank you, Mr. Kavulla.

Our next witness is Mr. David Porter, who is the chairman of the Railroad Commission of Texas and, Mr. Porter, thanks for being with us today, and you are recognized for 5 minutes.

STATEMENT OF DAVID PORTER

Mr. PORTER. Thank you, Chairman Whitfield, Ranking Member Rush and members of this committee. For the record, I am David Porter, chairman of the Railroad Commission of Texas.

For those of you who are not familiar with the Railroad Commission, we are the State of Texas' chief energy regulator. I am one of three statewide elected commissioners, and we oversee everything from oil and gas to pipelines, uranium exploration, surface coal mining, natural gas, local distribution companies and alternative natural gas fuels.

The Railroad Commission has effectively regulated the oil and gas industry in the state of Texas since 1919. It is one of the oldest State agencies in the Nation and the most mature energy regulatory body in the world.

Texas is the Nation's largest producer of oil and natural gas, and the commission monitors approximately 433,000 oil and natural gas wells, more than 335,000 of which are actively producing.

This energy production supports 2 million jobs in Texas and about a quarter of the State's economy. The oil and gas industry significantly benefits Texas as well as the entire United States.

The recent surge in drilling has considerably bolstered the national economy. The result in historical production increases have also paid the way for extraordinary geopolitical advantages.

In recent years, the United States has been able to surpass Saudi Arabia and Russia as the leading producer of oil and natural gas liquids in the world.

We have also seen a huge shift in the balance of trade because of the growing strength of our domestic energy industry. Domestic oil production has increased by 4.3 million barrels per day since 2006 and correspondingly, because of that increase, the trade deficit has been decreased.

As chairman of the Railroad Commission, it is my job to ensure fair and consistent energy regulation in Texas so businesses can safely, efficiently and economically produce the energy that powers our State and national economies.

That said, I very much appreciate the opportunity to submit this testimony regarding recent rulemaking by the United States Environmental Protection Agency under the Clean Air Act.

In my written testimony, I have detailed the Railroad Commission's specific concerns about the recent EPA methane rules, the Clean Power Plan and the mercury and air toxic standards.

Time constraints will prevent me from detailing the extensive concerns the commission has with the unprecedented EPA rulemakings outlined in that testimony. But you will find that these concerns are based on scientific fact and sound legal and economic analysis.

You will also find that the underlying themes in EPA rulemaking under the Obama administration have been the consolidation of increased regulatory power in the Federal Government to the det-

riment of State authority and the circumvention of regulatory authority granted to the EPA by Congress.

Clean Air Act rulemaking by the EPA during the Obama administration has been characterized by minimal interaction and consultation with Texas and other State regulatory authorities, underestimated or ignored compliance costs, overestimated, unjustified and exaggerated regulatory and environmental benefits, increased regulatory and economic burden on operation companies, especially the smaller operators who make up an overwhelming majority of the oil and gas industry in Texas, and the creation of one-size-fits-all regulations that ignore economic realities and the significant differences in regional operating conditions in State regulatory existence.

History shows that decreases in emissions and improved environmental conditions came about as a result of innovative technological advances in market-driven efficiencies, not through the massive overreach of Federal bureaucrats.

The Railroad Commission of Texas takes its role as a steward of State resources very seriously. Our rulemaking decisions are based on sound science and potential economic impacts to all Texans, mindful that it is from industry that these entrepreneurial ideas emerge.

When businesses are forced to operate as bureaucracies which EPA seems intent on achieving through its unwarranted and overreaching rules, innovation is stifled and both consumers and the environment pay the price.

EPA policies under the Obama administration have consistently striven to eliminate competitive energy markets while ignoring engineering realities, sound science and economic impacts.

Simultaneously, EPA has circumvented both the authorities delegated to it by Congress and the rights of State regulatory agencies to establish their own rules.

I believe you will find ample evidence of this in my submitted testimony. I respectfully urge this committee to prevent this administration from further assuming unconstitutional powers and imposing intrusive regulations on the States to ensure that our Nation continues to serve as the global energy leader we are today.

Thank you for this opportunity to testify.

[The prepared statement of Mr. Porter follows:]

**Submitted Testimony of David Porter
Chairman, Railroad Commission of Texas
Before the U.S. House Committee on Energy and Commerce
Subcommittee on Energy and Power
July 6, 2016**

Chairman Whitfield, Ranking Member Rush and members of the Committee:

For the record, I am David Porter, Chairman of the Railroad Commission of Texas.

For those of you who are not familiar with the Railroad Commission of Texas, we are the State's chief energy regulator. I am one of three statewide elected Commissioners, and we oversee everything from oil and gas to pipelines, uranium exploration, surface coal mining, natural gas local distribution companies and alternative natural gas fuels.

The Railroad Commission of Texas has effectively regulated the oil and natural gas industry in the State of Texas since 1919. It is one of the oldest state agencies in the nation and the most mature energy regulatory body in the world. The Commission's primary statutory responsibilities in the regulation of oil and gas are to: conserve the State's natural resources; prevent the waste of natural resources; protect the correlative rights of mineral interest owners; protect the environment from pollution associated with oil and gas development activity; and promote safety for personnel and communities involved in or affected by oil and gas development. The Railroad Commission works closely with the Texas Commission on Environmental Quality, which has primary jurisdiction over air emissions for the purposes of safeguarding the State's air resources.

Texas is the nation's largest producer of oil and natural gas and the Commission monitors approximately 433,000 oil and natural gas wells, more than 335,000 of which are actively

producing. This energy production supports two million jobs in Texas and about a quarter of the State's economy. The industry benefits Texas and the entire United States.

The recent surge in oil and gas drilling has considerably bolstered the national economy, attracting hundreds of billions dollars in U.S.-based investments and contributing hundreds of billions dollars annually to the national GDP. These historic production increases have also paved the way for extraordinary geopolitical advantages. In recent years, the United States has been able to surpass Saudi Arabia and Russia as the leading producer of oil and natural gas liquids in the world.

We have also seen a huge shift in the balance of trade because of the growing strength of our domestic energy industry. Domestic oil production has increased by 4.34 million barrels per day since 2006, and correspondingly, the trade deficit has decreased \$230 billion dollars in 10 years, from \$-762.72 billion to \$-531.50 billion – about 30 percent.

As Chairman of the Railroad Commission, it is my job to ensure fair and consistent energy regulation in Texas — so businesses can safely, efficiently and economically produce the energy that powers our state and national economies. I very much appreciate the opportunity to submit this testimony regarding recent rulemaking by the United States Environmental Protection Agency (EPA) under the Clean Air Act (CAA).

CAA rulemaking by EPA during the Obama administration has caused grave concern in Texas for numerous reasons. The rulemaking has been characterized by:

- minimal interaction and consultation with Texas and other State regulatory authorities;
- underestimated or ignored compliance costs;
- overestimated, unjustified and exaggerated regulatory and environmental benefits;
- increased regulatory and economic burden on operating companies, particularly the smaller operators who make up an overwhelming majority of the industry in Texas; and
- creation of “one-size-fits-all” regulations that ignore the significant differences in regional operating conditions and State regulatory systems.

The underlying themes in EPA rulemaking under the Obama Administration have been the consolidation of increased regulatory power in the Federal Government to the detriment of State authority, and the circumvention of the regulatory authority granted to EPA by Congress.

My testimony below will specifically address the recent EPA Methane rules, the Clean Power Plan and the Mercury and Air Toxics Standards.

EPA Methane Rules

EPA rules on methane emissions from the oil and gas sector are just another assault from this administration in the President’s war against fossil fuels and a blatant attempt to forcibly take over the regulation of Texas’ oil and gas industry, a job the Railroad Commission has excelled at for almost a century. These overbearing regulations accomplish nothing other than restricting

business growth and innovation, wounding our economy and killing the jobs Texans rely on to support their families.

The new EPA rules on methane emissions include New Source Performance Standards for New Modified and Reconstructed Sources and the Source Determination Rule.

Methane Emissions – New Source Performance Standards for New, Modified and Reconstructed Sources

The Commission is concerned that the oil and natural gas industry in Texas will be significantly impacted by the methane rules, which continue the uncontrolled expansion of EPA's authority to regulate and control oil and natural gas activities in Texas and other States.

EPA underestimated the number of sources that will be affected by the impacts of these burdensome regulations and the costs associated with the rule. In addition, EPA substantially overestimated the industry's ability to meet the compliance schedule because it failed to take into account the availability of the required control equipment.

The New Source Performance Standards cover all aspects of oil and gas production, processing, transmission and storage. These excessive rules greatly expand the regulatory requirements for reviews, inspections and compliance efforts, without the associated funding and without sufficiently demonstrating significant or even proportional gains in public health and environmental protection.

The Commission opposes any mandatory requirement to use third parties to verify completion of tasks, evaluate performance or implement a review and certification program because it would significantly increase the regulatory and economic burden on oil and gas operators, particularly the smaller operators who make up an overwhelming majority of the industry in Texas. Similarly, the Commission does not support an additional mandatory regulatory layer of third parties to support compliance reporting; the use of third party reporting should be a decision of the regulated entities.

The Commission is concerned that EPA did not sufficiently consider availability of control equipment and the significant drop in oil and gas prices when establishing time lines and compliance dates, and has urged EPA to incorporate more flexibility and make sure it prioritizes based on size of emission source.

The Commission supported exemptions for low production well sites of less than 15 barrels of oil equivalent or less per day and sites with less than 300 SCF/bbl gas-to-oil ratio. The Commission also urged EPA to establish other exemptions for small oil and gas sites based on reasonably limited emissions or equipment, and is disappointed that EPA included low production well sites in the final rule.

With respect to leak detection and repair, the Commission expressed concerns about the use of optical gas imaging as the *only* method of demonstrating compliance with leak detection and repair requirements. We appreciate that the final rule did not limit the compliance tool to this

technology, but remain concerned that allowing operators to use “Method 21” as an alternative still precludes the use of other comparable leak detection methods and inhibits innovation by minimizing the value of research into other new leak detection technologies and methods at oil and gas sites.

The Commission has continued to suggest that EPA establish a workgroup with State regulatory, environmental and industry representatives to simplify reports and submittals needed to comply with federal oil and gas air regulations, including elimination of duplicate requirements and publication of straightforward implementation and support materials to help industry achieve compliance.

Methane Emissions – Source Determination Rule

EPA had proposed two options for determining whether two or more properties in the oil and natural gas sector are “adjacent,” and both Option One and Two raised significant implementation issues that would create an overly broad aggregation policy and cause uncertainty by: slowing down the permit review process; transforming minor sources to major sources; usurping State authority to review and regulate what would otherwise be minor sources; and failing to take into account the realities of oil and gas operations. The Commission expressed its opposition to both Option One and Two.

The Commission opposes establishing the distance of one-quarter mile within which multiple sites will be treated as a single source. Texas rules currently use a distance test as guidance that also provides the flexibility necessary to aggregate sources where circumstances require.

Texas has a statute that specifically addresses aggregation of oil and gas minor sources. Texas Health and Safety Code section 382.051964 allows aggregation of oil and gas production facilities under permit by rule or standard permit that meet four criteria. The facilities must be under common control, under the same first two-digit major grouping of Standard Industrial Classifications, less than one quarter mile from each other and operationally dependent. This conjunctive approach ensures that only those sources that are operationally dependent are aggregated as one source consistent with federal law, and uses the common sense notion of “plant” and the plain meaning of the term “adjacent.” By capturing sites that merely share equipment and are within ¼ mile of each other, the new federal rule will deprive the State of the flexibility to develop and apply appropriate guidance and State law that best comports with activities in the State.

Texas regulates small oil and gas sources through its minor source permitting program, applying stringent control requirements appropriate for this source type. The vast majority of oil and gas sources are authorized under permits by rule or standard permits. The controls required under these authorizations are appropriate to the equipment at the facility or site and are developed to be protective of public health.

Furthermore, oil and gas facilities must comply with many other applicable State and/or federal standard(s). Many of the authorized sites utilize flares, vapor recovery units and/or other collection/combustion devices to control and collect emissions to comply with the existing State and federal regulations. Therefore, aggregation of these sites would not result in lower emissions. For example, NSPS OOOO applies to most oil and gas sites constructed, modified or reconstructed after August 23, 2011, and as such, the sites may be required to control storage vessel emissions based on their potential to emit. Since these control requirements are on a per tank basis, EPA's rule would result in aggregation of these sites, but would not result in any increase in the number of facilities being controlled or any reduction in emissions. The practical result is that the aggregated sites would be subject to an unnecessary and more onerous, time consuming and less predictable permitting process, stalling growth and production without any detectable environmental or health benefit.

Finally, the stated policy reasons for this rule's focus on the oil and gas sector are wrong. First, EPA claims that this industry sector should be looked at separately from all other sectors, "...because permitting decisions are difficult and time-consuming. Providing this guidance will promote a consistent regulatory treatment for this industry." In Texas, the Texas Commission on Environmental Quality has developed streamlined permitting mechanisms for minor sources, and the oil and gas sector specifically, that significantly reduce review timeframes. Permitting decisions for the oil and gas industry are not more difficult or time consuming than other industry sectors. EPA states that one potential outcome of aggregating oil and gas sources is to create major sources, thus requiring more stringent BACT-based controls on emissions. Texas already authorizes oil and gas minor sources and applies stringent control requirements for these

types of sources. In addition, by EPA's own admission, a better approach to controlling emissions from the oil and gas sector is through the NSPS or NESHAP programs, and in ozone nonattainment areas, control techniques guidelines. These programs do not rely on an expansive definition of a source for applicability, thus they will typically apply to minor sources.

EPA should have abandoned this source determination rule for Major New Source Review and Title V and allowed States to utilize their existing processes to develop additional guidance and policies that best fit their State. This approach would afford the States the deference to which they are entitled to administer their minor source programs in accordance with their SIP-approved programs. Texas' recommendation is that EPA should have retained the existing definition and interpretation of adjacency, allowed the States to maintain applicable minor source programs as provided under the FCAA as Texas has done and further allowed the States to develop and adopt appropriate major source guidance for PSD and NNSR programs and the Title V programs.

EPA Clean Power Plan

Since EPA published the Clean Power Plan in August, 2015 it has been challenged in the courts by Texas and a large number of other States, companies in the fossil fuel industry, and industry groups as a federal power grab that would cause severe economic damage. The Supreme Court stayed the rule in February, 2016 pending completion of the litigation.

The Supreme Court's decision to temporarily halt Obama's Clean Power Plan is encouraging for Texas, and for the other 26 State that adamantly oppose this radical climate change policy. Our State's coalition makes an indisputable case: these expensive measures to cut carbon emissions and reduce coal use will strain our grid, and Texans and all other Americans will pay the consequences with obscenely high electric bills. The President disregards the Constitutional limits of his office and public opinion to forward his own liberal agenda that combats fossil fuels and favors unreliable and costly alternative energy sources. In promoting this agenda, he has allowed EPA to become the mouthpiece for ideological propaganda. I hope the Court continues to realize that this tyrannical intrusion into the free market is costly, illogical and uncalled for.

EPA's final rule titled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units" (aka the Clean Power Plan) was the latest in a series of regulations that will increase the cost of electricity and natural gas by nearly \$300 billion in 2020 compared with 2012, according to a study released by Energy Ventures Analysis, Inc. The study, "Energy Market Impacts of Recent Federal Regulations on the Electric Power Sector," demonstrates the heavy financial burden EPA's collection of regulations will force on American families, businesses, and manufacturers through soaring energy costs.

This rule seeks to prompt an aggressive transformation of electricity generation in Texas and nearly every other State by systematically "decarbonizing" power generation and ushering in a new "clean energy" economy. Although Congress has debated a number of bills designed to achieve that very result, it has not adopted any such legislation. Frustrated with Congress, EPA apparently discovered sweeping authority in section 111(d) of the Clean Air Act (a provision that

has been used only five times in 45 years) to issue the Clean Power Plan that forces States to fundamentally alter electricity generation throughout the country.

EPA's audacious assertion of authority in this rule is more far-reaching than any previous effort by the agency. According to EPA, section 111(d) authorizes it to use the States to impose on fossil fuel-fired power plants emission reduction requirements that are premised not just on pollution control measures at the regulated plants, but also (and predominantly) on reducing or eliminating operations at those plants and shifting their electricity generation to competitors, including those not regulated by the rule. Those reduction requirements far exceed what EPA has found may be achieved individually by even a new plant with the agency's state-of-the-art "best system of emission reduction." Rather, the reduction requirements can be met only by shutting down hundreds of power plants, limiting the use of others and requiring the construction and operation of other types of facilities preferred by EPA—a directive EPA euphemistically calls "generation shifting."

EPA's legal theory is at odds with the plain language of section 111 and certainly is not clearly authorized by that provision. Section 111(d) authorizes EPA to establish procedures under which Texas and other States set "standards of performance for any existing source," i.e., standards that are applicable to a particular source within a regulated source category. Those standards must reflect the application of the best system of emission reduction to that source, i.e., to a building, structure, facility or installation. In other words, EPA may seek to reduce emissions only through measures that can be implemented by individual facilities. Indeed, for 45 years, EPA has consistently interpreted section 111 standards of performance in this way — not only in the five

instances in which it has addressed existing sources, but also in the more than one hundred rulemakings in which it has adopted standards for new sources.

The Clean Power Plan is also unlawful because it prevents Texas and other States from exercising the authority granted to them under section 111 to establish standards of performance and to take into consideration the remaining useful life of an existing source when applying a standard to that source.

Finally, the Clean Power Plan violates the Constitution. In order to pass constitutional muster, cooperative federalism programs must provide Texas and the other States with a meaningful opportunity to decline implementation. But it does not do so; States that decline to take legislative or regulatory action to ensure increased generation by EPA's preferred power sources face the threat of insufficient electricity to meet demand. The Clean Power Plan is thus an act of commandeering that leaves States no choice but to alter their laws and programs governing electricity generation and delivery to accord with federal policy.

If upheld, the Clean Power Plan would lead to a formidable, unprecedented and unlawful expansion of EPA's authority. The resulting restructuring of nearly every State's electric grid would exceed even the authority that Congress gave to the Federal Energy Regulatory Commission, the federal agency responsible for electricity regulation. But EPA's theory of "generation shifting," which is not about making regulated sources reduce their emissions while operating but rather about preventing many sources from operating at all, does not stop with the power sector. EPA's newly-discovered authority threatens to enable the agency to mandate that

any existing source's owners in any industry reduce their source's production, shutter the existing source entirely and even subsidize their non-regulated competitors. Section 111(d) would be transformed from a limited provision into the most powerful part of the Clean Air Act, making the agency a central planner for every single industry that emits carbon dioxide. Congress did not intend and could not have foreseen such a result when it passed the provision more than 45 years ago. I consider such an outcome to be abhorrent and unconstitutional.

Mercury and Air Toxics Standards

EPA's Mercury and Air Toxics Standards, or MATS, was finalized in February 2012 and was scheduled to take effect in April 2015. The rule as originally proposed required reductions in the volume of various emissions from coal- and oil-fired power plants with a capacity of at least 25 megawatts; it includes mercury and other metals (arsenic, chromium and nickel), as well as "acid gases" such as hydrochloric acid and hydrofluoric acid.

Texas, numerous other States and other petitioners sought review of the Mercury Rule in the D.C. Circuit, challenging EPA's failure to consider costs when making the threshold decision whether it was appropriate to regulate at all. The D.C. Circuit rejected all of the challenges to the Rule, including upholding EPA's threshold decision not to consider costs. In *Michigan v. EPA*, the U.S. Supreme Court reversed the D.C. Circuit's decision on the costs issue. The Court concluded that EPA exceeded its lawful authority: "EPA strayed far beyond those bounds when it read § 7412(n)(1) to mean that it could ignore cost when deciding whether to regulate power plants." The Court held that EPA "must consider cost—including, most importantly, cost of

compliance—before deciding whether regulation is appropriate and necessary.” The Court reversed the judgment of the Court of Appeals for the D.C. Circuit and remanded the cases for further proceedings.

That decision sent the rule back to the D.C. Circuit for further review, which ruled against the states and industry groups that argued the entire rule should be scrapped. Instead, the appeals court allowed the rule to remain in effect while the agency made the revisions ordered by the Supreme Court. In April, EPA issued its new analysis of the costs of this rule, claiming to curb mercury emissions from power plants. The U.S. Supreme Court has refused to review the lower court’s decision to allow this rule to remain in place during further proceedings.

While the MATS rule primarily impacted coal-fired power generation, it exemplifies this administration’s attitude toward regulation: ignore the consequential compliance burdens and costs; ignore the impact on the economy, the cost of electricity and jobs; ignore the State’s ability to manage their resources effectively; and ignore the limits of statutory authority. In nearly all of its CAA regulation, the Obama EPA has surpassed the limits of its authority, resulting in years of expensive and wasteful litigation that forces the courts to rein it in. And by including short compliance periods in their illegal regulations, EPA has accomplished its desired result even when the regulation is ultimately held invalid. By the time the Supreme Court held that EPA acted unreasonably when it made power plants subject to regulation without considering the cost of such regulation, for most of the affected companies the ruling was too late. Under EPA’s aggressive compliance deadlines, most had already spent billions of dollars to comply. In the months that passed between the time MATS was first promulgated and the case

was decided by the Supreme Court, jobs were lost, power plants were closed and enormous costs were incurred. So while the MATS litigation continues to this day, EPA is proud of having accomplished its objectives with their unlawful MATS regulations.

History shows that decreases in emissions and improved environmental conditions come about as a result of innovative technological advances and market-driven efficiencies, not through the massive regulatory overreach of federal bureaucrats. The Railroad Commission of Texas takes its role as a steward of State resources very seriously. That said, our rulemaking decisions are based on sound science and potential economic impacts to all Texans, mindful that it is from industry that these entrepreneurial ideas emerge. When businesses are forced to operate as bureaucracies, which EPA seems intent on achieving through its unwarranted and overreaching rules, innovation is stifled leaving both consumers *and* the environment to pay the price. EPA's policies under the Obama Administration have consistently striven to eliminate competitive energy markets while ignoring engineering realities, sound science and economic impacts. Simultaneously, EPA has circumvented both the authority delegated to it by Congress and the rights of state regulatory agencies to establish their own rules.

I respectfully urge this Committee to take the Railroad Commission's comments on the CAA rulemaking by EPA seriously; prevent this administration from further assuming unconstitutional powers and obtrusive regulations on the State; and ensure that our nation continues to serve as the global energy leader we are today.

Thank you again for the opportunity to speak and I'd be happy to answer any questions regarding my testimony.

Mr. WHITFIELD. Thank you, Mr. Porter.

Our next witness is Mr. Lynn Helms, who is the director for the North Dakota Industrial Commission at the Department of Mineral Resources. Thanks for being with us, and you are recognized for 5 minutes.

STATEMENT OF LYNN D. HELMS

Mr. HELMS. Good afternoon, Chairman Whitfield and Ranking Member Rush, members of the subcommittee. Thank you for this opportunity to provide comments from the great State of North Dakota on EPA's regulatory activity during the Obama administration.

North Dakota is ranked second in the United States amongst all the States in production of oil and gas. We produce approximately 430 million barrels of oil and 585 billion cubic feet of natural gas each year.

The North Dakota Industrial Commission and Geological Survey oil and gas division regulate operations related to production of oil and gas and protection of the State of North Dakota's environment.

I have highlighted in my written testimony nine specific actions since 2009 that have had major negative consequences to North Dakota regulatory environment and/or economy.

It needs to be kept in context that those have been done in conjunction with seven regulatory actions by the Department of the Interior.

Those nine are the March 2010 to present hydraulic fracturing drinking water study, the December 2010 class six CO₂ rules, the February 2014 hydraulic fracturing using diesel fuel rule, the May 2014 hydraulic fracturing chemical disclosure rule, the May 2015 waters of the U.S., August 2015 Clean Power Plan, May 2016 RCRA lawsuit, June 2016 methane reduction for new and modified sources and the June 2016 methane reduction information request on existing sources.

North Dakota has been left with no choice but to litigate three of those actions and we have been involved in that litigation. I want to focus the remainder of my time talking about two or three of those.

In June of 2014, with the final rule published in August of 2015, the Environmental Protection Agency under President Obama's climate action plan proposed to cut carbon pollution, known as the Clean Power Plan.

This directly interferes with North Dakota's ability to reduce natural gas flaring in the State. In order to build the infrastructure to collect and process the natural gas that's coming from the Bakken formation, the industry needs 300 megawatts of new electric generation.

Instead of granting us the ability to produce or build 300 megawatts of additional generation, the plan requires that we cut or retire 1.3 gigawatts of existing power generation in the State.

The result of that is a cumulative increase of flaring of almost a trillion cubic feet of natural gas, a loss to the State of over \$100 million in gross production tax revenue and a loss to the mineral owners of the State of \$570 million in royalty income.

North Dakota, along with 26 other States, sought and received a stay of this rule. North Dakota's reduction of carbon emissions under the proposed rule was 11 percent. That was going to be difficult but maybe achievable. Under the final rule, it was raised to 45 percent with no warning that that was coming.

No credit for pre-2013 natural gas or wind installations, and I can guarantee you that power costs will not go down in the State of North Dakota.

On June 3rd of 2016, a final rule proposing a suite of changes to the Clean Air Act for new and modified emission sources in the oil and natural gas industry was published in the Federal Register.

This rule contains all sorts of undefined things like "technically achievable," "technically feasible," "technically infeasible." It's a direct conflict with rules in the State of North Dakota for reducing natural gas flaring.

The rule does not adhere to the statutory language in the Clean Air Act for defining sources of emission. It aggregates sources using a new quarter-mile standard which will cause problems for the State of North Dakota for regulating how oil well sites are placed in the State in order to minimize the footprint of those sites on the State's landscape.

Finally, the proposed rule says it doesn't have any federalism implications. But that's not true. The proposed rule will conflict with numerous North Dakota current regulations.

North Dakota is currently filing a petition for review of this harmful rule. And then finally, on June 3rd of 2016, the proposed information collection effort for oil and gas facilities was published in the Federal Register.

Information requests for tens of thousands, maybe 100,000 existing facilities, are being distributed across the country. Comments on this proposed information collection are due August 2nd and we plan to submit extensive comments.

Unfortunately, North Dakota has submitted extensive comments on all of these rulemakings and not one of them has been accepted by the EPA.

Thank you for your time.

[The prepared statement of Mr. Helms follows:]

**Congress of the United States
House of Representatives
Committee on Energy and Commerce
Subcommittee on Energy and Power
July 6, 2016
2125 Rayburn House Office Building, Washington, DC**

**Testimony by Lynn D. Helms, Director
North Dakota Industrial Commission
Department of Mineral Resources**

Chairman Whitfield, Ranking member Rush, and members of the Subcommittee

**Thank you for this opportunity to provide comments on "EPA's Regulatory Activity
During the Obama Administration: Energy and Industrial Sectors."**

The State of North Dakota is ranked 2nd in the United States among all states in the production of oil and gas. North Dakota produces approximately 430 million barrels of oil per year and 585 billion cubic feet of natural gas per year. The North Dakota Industrial Commission (NDIC) Department of Mineral Resources (DMR) Oil and Gas Division and Geological Survey have jurisdiction over gathering pipelines, oil and gas spill reporting, and well site construction regulation of the drilling, production and plugging of wells; the restoration of drilling and production sites; the perforating and chemical treatment of wells, including hydraulic fracturing; the spacing of wells; operations to increase ultimate recovery and prevent waste, such as cycling of gas; the maintenance of pressure; and the introduction of gas, water, or other substances into producing formations; disposal of saltwater and oil field wastes through the North Dakota Underground Injection Control Program; restricting and reducing the flaring of natural gas associated with crude oil production; and many other operations related to the production of oil or gas and protection of the State of North Dakota's industrial interests.

North Dakota's experience with EPA oil and gas regulation during the Obama administration began when the 111th Congress in its FY2010 Appropriations Committee Conference Report, urged the EPA to study the relationship between hydraulic fracturing and drinking water, using the best available science, independent sources of information, and to conduct the study in consultation with others using a transparent, peer-reviewed process. The EPA announced in March 2010 that it would conduct a research study to investigate the potential impacts of hydraulic fracturing on drinking water resources. The State of North Dakota is a stakeholder in the results of this study. Our interest comes from our involvement in the retrospective case study in Killdeer, North Dakota that is included in the study.

We expect EPA to stand by its commitment to using the best available science, a transparent peer-reviewed process, quality assurance principles, independent sources of information and consultation with others. North Dakota effectively worked alongside the EPA at the Killdeer retrospective site in October, 2011.

However, the assessment does not include quantitative information on how many instances of each contamination mechanism were identified or the geological and geographical circumstances of each instance.

It is now more than six years later and the assessment has not been finalized because the EPA Scientific Review Board is dealing with concerns over the definitions of "widespread" and "systemic".

On December 10, 2010 EPA issued a rule that established a new well class, Class VI, for underground storage of CO₂. The Class VI rule established numerous technical criteria to protect underground sources of drinking water from the long-term subsurface storage of carbon dioxide (CO₂). On December 12, 2013 EPA published draft "Underground Injection Control (UIC) Guidance on Transitioning Class II Wells to Class VI Wells" (EPA 816-P-13-004)

In addition to providing comments on the rule and guidance, North Dakota formally requested the United States Environmental Protection Agency (USEPA) reconsider the provision 40 CFR 144.19 Transitioning from Class II to Class VI and allow for public comment.

Changes to a proposed rule must be reasonably anticipated by the public and a logical outgrowth of the proposal. *Shell Oil Co. v. E.P. A.*, 950 F.2d 741, 750 (D.C. Cir. 1991).

The guidance document appears to be an attempt to expand the authority of the USEPA by over filing State Class II primacy programs. Furthermore, this guidance appears to expand the authority of the Class VI UIC program Director over a Class II program or a Class II operator by allowing the Class VI UIC program Director the authority to require additional information/data to make a determination whether the Class II project can continue or should be required to transition. The Class VI UIC program Director has no authority over the Class II UIC program Director, nor does the Class VI UIC program Director have authority over the Class II project owner or operator. The SDWA authority does not extend to private minerals or pore space ownership, further complicating the entire concept of transitioning a carbon dioxide enhanced recovery project to a carbon dioxide storage project. In North Dakota, the pore space is owned by the overlying surface estate rather than a severed mineral owner. The NDIC regulates the drilling and production of oil and gas in North Dakota with the mission:

... to foster, to encourage, and to promote the development, production, and utilization of natural resources of oil and gas in the state in such a manner as will prevent waste; to authorize and to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas be had and that the correlative rights of all owners be fully protected; and to encourage and to authorize cycling, recycling, pressure maintenance, and secondary recovery operations in order that the greatest possible economic recovery of oil and gas be obtained within the state to the end that the landowners, the royalty owners, the producers, and the general public realize and enjoy the greatest possible good from these vital natural resources. N.D.C.C. § 38-08-01

It is of great concern to North Dakota that the USEPA rule and guidance would potentially conflict with the NDIC's mission to prevent waste, maximize recovery, and fully protect correlative rights.

On June 21, 2013 North Dakota submitted a Class VI Primacy Application.

On August 9, 2013 EPA Region 8 Published Notice for Comment on North Dakota's Class VI Primacy Application for a 30 Day Comment Period. No comments were received in opposition.

On October 29, 2013 North Dakota finalized the Class VI MOA with EPA Region 8.

On January 8, 2014 Federal Register Approval to amend 40 CFR Subpart JJ 147.1751 to add Class VI program was published.

Concurrence of approval of North Dakota's Class VI application has been received from Office of General Council, Office of Water, Office of Policy, and Region 8. The application was sent to the Administrator's office for final approval July 14, 2014.

In February, 2014 EPA published an advanced notice of Permitting Guidance for Oil and Gas Hydraulic Fracturing Activities Using Diesel Fuels. The guidance states that hydraulic fracturing is a form of enhanced recovery under “Regulation of Hydraulic Fracturing in the UIC Program”. **Trying to fit hydraulic fracturing using diesel fuels into the Class II Program is inappropriate. EPA should have withdrawn its guidance and initiated a separate, proper, rule making process for regulation of hydraulic fracturing using diesel fuels.** Under “Recommendations for Describing Diesel Fuels” the definition of diesel fuel is too broad. EPA termed this proposal as guidance and stated that it is not a regulation. At the same time under “Does this Guidance Apply to States, Tribes, and Territories with Primacy?” EPA has included that EPA retains an oversight role in primacy states and may commence enforcement actions under specific conditions if an owner or operator violates a UIC requirement, but under “Does this Guidance Apply to States, Tribes, and Territories with Primacy?”, EPA states that this guidance does not apply to states, tribes, and territories with UIC primacy then goes on to explain how such entities must choose from varying approaches to permitting.

The permitting requirements for hydraulic fracturing using diesel fuels are a significant expansion of the UIC Program. The guidance requires information to be submitted on other “subsurface formations of interest” without defining the term or establishing a purpose for the information. Many of the proposed requirements placed on permitting of hydraulic fracturing operations using diesel fuels are not required in the current Class II regulations.

The guidance interferes with North Dakota rules that regulate temporary abandonment and plugging and abandonment.

This guidance includes language about the management of short-term and cumulative impacts on communities, land use, wildlife, and ecologies. This language must be removed as it goes beyond EPA's regulatory authority under the SWDA.

The guidance contains new extensive recommendations for monitoring USDW that are not in the current UIC program or utilized on producing oil and gas wells. This would require monitoring wells to be drilled for current wells which would create another potential pathway for contamination.

Requiring approval of the log results would create an expensive and burdensome workload for no additional environmental protection.

The public notification process will take a minimum of 90 days, and likely much longer depending on the workload, before a permit can be issued and will provide no additional environmental protection.

The proposed additional time-consuming and costly requirements are not commensurate with the environmental threat. Many states that run effective regulatory programs and have adopted hydraulic fracturing rules that include chemical disclosure, well construction, and well bore pressure testing should be explicitly exempted from the guidance.

On May 9, 2014 EPA published an advanced notice of proposed rule-making to seek comments on the information that should be reported or disclosed for hydraulic fracturing chemical substances and mixtures and the mechanism for obtaining this information. The proposed rule-making is in response to a petition from Earthjustice and 114 other groups who are opposed to the use of the GWPC-IOGCC FracFocus website process of chemical disclosure and any type of trade secret protection for hydraulic fracturing fluid mixtures. These groups are requesting EPA regulation of chemical disclosure under the federal Toxic Substances Control Act. North Dakota had already promulgated effective regulations requiring chemical disclosure and environmental protection. North Dakota's rules properly focus on well construction and testing to prevent hydraulic fracturing fluids from entering the environment and also include a requirement for operators to disclose chemicals used in hydraulic fracturing on FracFocus within 60 days of completion of the hydraulic fracturing operation.

Allowing for trade secret protection as performed within FracFocus is important for four reasons:

- First, it is the law of the land. Current federal and state laws provide for trade secret protection.
- Second, trade secret protection is a wonderful incentive for investment by hydraulic fracturing chemical manufacturers in newer, safer, and greener products.
- Third, release of such trade secret protected information might encourage operators to forego using the "newest" and "proprietary" chemicals since no proprietary information protection is provided.
- Finally, any information needed to respond to incidents involving release of hydraulic fracturing chemicals not available through FracFocus is already available through EPCRA and CERCLA laws and rules.

By far the best way for EPA to minimize reporting burdens and costs, avoid duplication of efforts, and maximize transparency and public understanding is to encourage the use of FracFocus nationwide. EPA should consider funding of programs such as FracFocus and Interstate Oil and Gas Compact Commission and Ground Water Protection Council programs such as the State Oil and Gas Regulatory Exchange, UIC Peer Reviews, and National Field Inspector Certification Program. All of these programs are overseen by Governors and state regulators who can provide independent third-party certification, collection of information, and development of best practices about hydraulic fracturing operations in lieu of a new EPA mandatory reporting or voluntary disclosure program.

On May 27, 2015 EPA Administrator, Gina McCarthy, and the Assistant Secretary of the Army (Civil Works), Jo Ellen Darcy, signed the “Waters of the United States” final rule.

Widespread flaring of natural gas has been a long-term, pervasive problem for oil and gas operators in North Dakota due to the limited but growing infrastructure that enables capture, sale, and processing of this valuable commodity. Many wells have no pipeline connection and others have undersized pipelines that must be expanded or rebuilt. In addition, the NDIC has been tasked by the North Dakota legislature, N.D. Cent. Code§ 54-17.7-03, to reduce truck transportation of crude oil and produced water "by facilitating development of pipeline facilities to support the production, transportation, and utilization of North Dakota energy-related commodities, thereby increasing employment, stimulating economic activity, augmenting sources of tax revenue, fostering economic stability, and improving the state's economy". In order to address these serious problems, the North Dakota legislature enacted laws requiring that flaring of gas produced with crude oil cease and pipeline infrastructure for transportation of oil and produced water is built. The gas capture rules adopted by the NDIC to enforce gas flaring reduction will require the gas gathering and processing industry to construct 2,000 to 3,000 miles of underground natural gas gathering pipelines per year for the next five to eight years. N.D. Cent. Code § 38-08-06.4 and NDIC Order 24665. Similar amounts of oil and produced water gathering pipelines must be built to comply with the policies adopted by the NDIC to develop pipeline facilities for transportation of crude oil and produced water. N.D. Cent. Code§ 54-17.7-03. In North Dakota, construction of the underground pipelines must occur between late August through the end of October, after crops are harvested but before the ground freezes.

The August 28, 2015 effective date of the **WOTUS Rule will directly impact the planned expansion of North Dakota's gas capture and infrastructure requirements** which will in turn, impact operators' ability to comply with North Dakota's flaring reduction laws and regulations. A loss of even one construction season will adversely impact the viability of North Dakota's statutory gas capture program and the related five-year pipeline expansion requirements. **The result will be a cumulative increase in the flaring of natural gas and the permanent loss of 67 trillion cubic feet of natural gas, \$7.5 million in gross production tax revenue for the State of North Dakota, and \$40 million in royalty income to mineral owners. In addition, any delay in pipeline expansion will increase heavy truck transportation of crude oil and produced water and the associated environmental impacts to air quality of 1.5 million semi-loads of crude oil and produced water.**

An additional example of an adverse impact from the WOTUS Rule is that ditches excavated in tributaries will become presumptively jurisdictional. The oil and gas industry must cross numerous ephemeral streams to install the required underground pipeline system discussed above, as well as for pipelines needed to transport produced water so that it is not necessary to transport it by truck. The significant delays associated with the new WOTUS Rule requirements for the excavated ditches will also interfere with the statutory flaring requirements discussed above and the necessary produced water pipelines needed to improve the safety and efficient transportation of potentially harmful material.

The NDIC has jurisdiction over construction of oil and gas well sites. Modern multi-well oil and gas locations contain small impoundments within containment dikes for the collection of precipitation such as storm water and snow melt. NPDES permits for removal of such collected water are typically managed by the North Dakota Health Department under the current

interpretation of federal rules. Again, the WOTUS Rule impacts a highly functional state regulatory system because such operations are now presumptively under federal jurisdiction instead of determining jurisdiction on a case by case basis. As is its sovereign right, the North Dakota legislature and the NDIC have enacted and promulgated numerous provisions to protect the health and welfare of its citizens, lands, environment, and productivity of North Dakota. The NDIC has statutory jurisdiction under N.D. Cent. Code § 38-08-04 to prevent the pollution of freshwater supplies by oil, gas or saltwater and to regulate the disposal of saltwater and oilfield wastes. N.D. Admin. Code§ 43-02-03-30 requires oil and gas operators to report all class II waste releases (oil and produced water spills), N.D. Admin. Code § 43-02-03-30.1 requires immediate removal of spilled or leaked material, and N.D. Admin. Code§ 43-02-03-19.2 requires proper disposal of all waste material recovered from spills and leaks. The NDIC has strict and comprehensive rules governing the reporting of these releases, but the WOTUS rule presumes that such releases are jurisdictional instead of determining jurisdiction on a case-by-case analysis. Based on this presumption, the WOTUS Rule will result in all releases being reported to the US Coast Guard National Response Center and spill remediation oversight by the EPA, which directly interferes with the State of North Dakota's sovereign right to preside over oil and produced water spill, reporting, and remediation.

In sum, the WOTUS Rule will interfere with and disrupt North Dakota's governance of the lands and waters within its borders. Especially for activities associated with oil and gas production, the WOTUS Rule will adversely affect laws and regulations that are vital to the overall health and welfare of the State of North Dakota and its citizens and will harm North Dakota's sovereign interests and disrupt regulations established to protect these interests.

On June 2, 2014, the U.S. Environmental Protection Agency, under President Obama's Climate Action Plan, proposed a plan to cut carbon pollution from power plants known as the Clean Power Plan.

Several North Dakota laws and regulations that successfully govern aspects of oil and gas production and exploration will be adversely impacted by the Final Rule. By altering the jurisdiction and state regulatory regime, the Final Rule will nullify the proven state regulatory program and thereby harm the State's sovereign interest in planning and developing the use of the oil and gas resources within its jurisdiction. Widespread flaring of natural gas has been a long-term, pervasive problem for oil and gas operators in North Dakota due to the limited but growing infrastructure that enables capture, sale, and processing of this valuable commodity. The North Dakota legislature enacted laws requiring that flaring of gas produced with crude oil cease and pipeline infrastructure for transportation of oil, natural gas, and produced water is built. The gas capture rules adopted by the NDIC to enforce gas flaring reduction will require the gas gathering and processing industry to install additional gas gathering and processing infrastructure over the next five to eight years that will require an estimated 300 MW of new electrical generation. The Final Rule will directly impact the planned expansion of gas capture infrastructure and the associated requirement for 300 MW additional electrical load by instead requiring the retirement of 1,300 MW of existing electrical generating capacity. This will in turn impact operators' ability to comply with North Dakota's flaring reduction laws and regulations. **The loss of electrical power for new gas gathering and processing between 2016 and 2020 will result in a cumulative increase in flaring and the permanent loss of 956 billion cubic feet of natural gas, \$107 million in gross production tax revenue for the State of North Dakota and \$570 million in royalty income to mineral owners.**

On March 26, 2015 a coalition of environmental organizations filed a 60 day legal notice with the U.S. Environmental Protection Agency demanding more regulation of drilling and fracking waste and on May 4, 2016 the lawsuit was filed.

Both the NDIC and the North Dakota Department of Health (“NDDH”) have authority for regulating oil and gas waste. The NDIC and NDDH jurisdiction is at times overlapping and concurrent. The NDIC maintains jurisdiction over oilfield waste from the point it is generated until it is properly disposed. The NDIC also regulates produced water transported in pipelines.

The NDIC, Oil and Gas Division currently has an annual budget of approximately \$94,000 for its Waste program and \$664,000 for the UIC Program. Of that budget, NDIC receives \$105,000 from EPA as an annual UIC Grant.

As is its sovereign right, the North Dakota legislature and the NDIC have enacted and promulgated numerous provisions to protect the health and welfare of its citizens, lands, environment, and productivity of North Dakota. The NDIC has statutory jurisdiction under N.D. Cent. Code § 38-08-04 to prevent the pollution of freshwater supplies by oil, gas or saltwater and to regulate the disposal of saltwater and oilfield wastes.

There are specific regulations governing each type of oil and gas waste, and disposal method, but the primary source of restrictions is the permit, which is issued to each operator or disposal facility and contains detailed restrictions on its location, operations, and reclamation planning. This highly localized, case specific process will not benefit from centralization or one-size fits all regulations that do not address the specifics of North Dakota geology, geography, and climate. NDIC also permits oilfield waste treating plants, after notice and a hearing. “A written application for a treating plant permit shall state in detail the location, type, capacity of the plant contemplated, method of processing proposed, and the plan of operation for all plant waste.”

Brines may be disposed of in underground injection wells pursuant to N.D. Admin. Code Chapter 43-02-05 and must be stored in surface facilities that “are devoid of leaks and constructed of materials resistant to the effects of produced saltwater liquids, brines, or chemicals that may be contained therein” or in tanks in good condition, with dikes erected and maintained around any saltwater tanks. N.D. Admin. Code § 43-02-03-53. No underground injection well may be constructed without permission from NDIC, and “[b]efore a permit for underground injection will be issued, the applicant must satisfy the commission that the proposed injection well will not endanger any underground source of drinking water.” N.D. Admin. Code § 43-02-05-04. NDIC also has authority to modify the permit.

The claim of the Plaintiffs in the litigation that the disposal of these wastes and waste waters is not regulated, or only loosely regulated, is simply false. Instead it is subject to stringent regulation by people who are familiar with local conditions with substantial input from members of the public who live in the area and are directly affected.

Conversion of the current RCRA Subtitle D programs to RCRA Subtitle C programs would require re-permitting of approximately 580 existing produced water UIC disposal wells at an estimated cost of \$87 million to the state of North Dakota and \$58 million to the oil and gas industry. In addition, the transportation of drill cuttings to RCRA Class C disposal sites would add an estimated 50 semi-loads per well or 2.5 million cumulative semi-loads burden on North Dakota road and bridge infrastructure over the development life of the Bakken oil field costing North Dakota taxpayers billions of dollars in road and bridge repairs.

NDIC vigorously enforces its regulations. The following table shows the high level of inspection and enforcement in North Dakota, as well as the effectiveness of the program for resolving non-compliance issues:

Inspection and Enforcement	1Q 2015	2Q 2015	3Q 2015	4Q 2015
Inspections	35,120	36,791	39,558	40,898
Rigs-weekly goal	105%	113%	120%	125%
UIC-monthly goal	98%	96%	98%	99%
Wells-quarterly goal	216%	220%	233%	228%
Problems Encountered	1,072	1,315	1,153	1,103
Resolved <30 days (verbal)	72%	81%	74%	80%
Resolved <180 days (written)	27%	18%	22%	15%
Complaints	5	1	1	6
Investigations Ongoing	0	0	0	0

In the litigation, Plaintiffs allege that EPA appears to have taken no action to strengthen and tailor its program for the regulation of oil and gas wastes under Subtitle D. North Dakota records show numerous program element enhancements have taken place through discussions with EPA Region 8 personnel:

- Notification to all Class II injection well operators, defining Class II wastes and providing a list of fluids acceptable for Class II injection, to be added to new permits on April 3, 1999.
- Defining the procedure for one time disposal of Class II wastes into production wells immediately prior to plugging and abandonment on May 10, 1993.
- Proposed changes to its rules and regulation on five occasions: June 10, 1994, May 24, 1994, June 6, 1996, October 6, 1999, and September 12, 2012.

On June 3, 2016 the final rule proposing a suite of changes to Clean Air Act permitting requirements for new and modified emissions sources in the oil and natural gas industry was published in the Federal Register.

North Dakota regulations for gas capture clearly define the initial flow back stage of well completions as 14 days. The proposed rule defines the flow back stage as the time when it is "technically infeasible" for a separator to function. In addition, North Dakota regulations for gas capture clearly define the separator flow back stage for a well completion as 90 days. The proposed rule defines this stage as the time when it is "technically infeasible" to route the recovered gas into a gas flow line or collection system, re-inject the recovered gas, use the recovered gas as an on-site fuel source, or use the recovered gas for another useful purpose. **The rule does not define "technically achievable, technically feasible, technically infeasible, or technically practical". This results in a clear conflict between the rule which contains undefined operational standards and existing North Dakota rules which contain a clearly defined numerical standard.**

North Dakota regulations for gas capture clearly define the first well in the spacing unit as exempt from the gas capture and production requirements imposed by NDIC Order 24665. The rule defines two subcategories of hydraulically fractured wells: (1) Nonexploratory and non-delineation wells, also known as development wells; and (2) exploratory (also known as wildcat wells) and delineation wells. **This also results in a clear conflict between existing North Dakota rules which contain a clearly defined standard and the rule which contains well definitions that are logical for conventional resource development, but not for unconventional development.**

The compliance time frames are too short. The well completions covered in the rule are spread over thousands of square miles and weather conditions in North Dakota can be very severe and dangerous for extended periods of time.

The rule does not adhere to the statutory language in the Clean Air Act section III(a)(3) to define source for the Prevention of Significant Deterioration (PSD), Nonattainment New Source Review (NNSR), and Major Source (Title V) programs. It combines pollutant emitting activities separated by a distance of one fourth mile or less. Those operations may be performed by multiple non-related parties. For an unconventional play like the Bakken and Three Forks formations, wells need to be located in close proximity along energy corridors to reduce environmental footprint. In addition, the adjacency rule will require a Title V permit for any two well pads within one fourth mile of each other, and will require a Prevention of Significant Deterioration (PSD) permit for any set of three or more well pads that are within one fourth mile of each other. The resulting requirement for a Title V or PSD permit modification for every application for permit to drill will constitute a clear conflict with North Dakota jurisdiction over oil and gas resources within the state and with NDIC Order 14497 and 14498 which establish well spacing requirements that reduce environmental footprint through the creation of energy corridors.

North Dakota regulations for natural gas capture have been enforced on the Fort Berthold Reservation under multiple tax and regulatory agreements between the state and tribes. The proposed rule will increase the number and complexity of conflicts with North Dakota regulations and the existing negotiated agreements.

The record keeping requirements of the proposed rule are far too voluminous for any kind of reasonable inspection and enforcement to be conducted. Additionally, the annual and semi-

annual reporting of the extensive identification and inspection **information required by the rule on a nationwide basis will create an unusable, costly, and burdensome records retention and inspection process for the EPA.**

The proposed rule states that it does not have federalism implications. The federalism analysis states the rule will have no substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. The analysis further alleges these final rules primarily affect private industry and would not impose significant economic costs on state or local governments. **This conclusion is incorrect as the proposed rule will conflict with the NDIC's current regulations.**

Finally, on June 3, 2016 the proposed "Information Collection Effort for Oil and Gas Facilities" was published in the Federal Register. Information requests for tens of thousands of existing facilities are anticipated. Comments on the proposed information collection are due August 2, 2016 and the NDIC intends to submit extensive comments.

Sincerely,

Lynn D. Helms, North Dakota Industrial Commission, Department of Mineral Resources

On behalf of the North Dakota Industrial Commission

Jack Dalrymple, Chairman
Governor

Wayne Stenehjem
Attorney General

Doug Goehring
Agriculture Commissioner

Mr. WHITFIELD. Thank you, Mr. Helms.

And our next witness is Mr. Robert Weissman, who is the president of Public Citizen, and Mr. Weissman, welcome and you are recognized for 5 minutes.

STATEMENT OF ROBERT WEISSMAN

Mr. WEISSMAN. Thank you very much, Mr. Chairman, and thanks to the gentleman from Virginia for joining us today and tolerating this panel discussion.

I wanted to make three brief points in my 5 minutes about both the regulatory process generally and about the regulatory process as regards clean air rules and EPA action.

The first point is that the overall benefits of regulation issued under both the Obama administration and the preceding Bush administration massively outweigh the costs. We have heard some reference to the best evidence about this earlier in the hearing.

Generally, for overall regulation, in the low end benefits outweigh costs two to one but probably as much as fifteen to one. In the area of EPA rulemaking, benefits outweigh costs four to one or as much as twenty to one.

And it should be said that I think the members of this committee are absolutely right to focus on individuals who may be displaced from jobs and recognizes there are real-life costs.

But they ought to also recognize the real-life benefits. These aren't just dollars being saved. These are illnesses being averted, deaths being prevented, children who are not suffering asthma attacks. The benefits are real.

As I discussed in my written testimony in some detail, retrospective looking at cost estimates shows that industry routinely overestimates costs and particularly in the environmental area and I will come back to that point later.

Second point I want to make is about the issue of regulatory delay. Public Citizen last week issued a new study looking at the issue of regulatory delay and showing how slow our rulemaking process is.

I think it's an area that this committee should look at because we actually need to do much better at getting rules out the door faster both to achieve their protective benefits and to avoid the problems of regulatory uncertainty.

Our study found that economically significant rules are 40 percent slower to be issued than other rules, that economically significant rules that are accompanied by a regularly flexibility analysis and an advance notice of proposed rulemaking take almost 5 years to issue, longer than the term of a president.

We found that regularly delay as a problem is getting worse, considerably worse now under the Obama administration than it was previously under the Bush administration. It now takes almost 3.8 years for a major rule to be issued.

We found that EPA and the Department of Energy are two of the slowest agencies at issuing rules and also, incidentally, that the Obama administration issued about 10 percent fewer rules than the Bush administration had done through this period of its term in office.

Lastly, I want to address focusing more specifically on clean air rules and looking at those points and drilling down as how they relate in the clean air and energy industrial sector.

Again, in this area, the benefits massively outweigh the costs, and just to focus on this area of the Clean Power Plan because I think there has been some uncertainty about it, the Clean Power Plan doesn't just generally have benefits that outweigh costs.

Consumer cost—the consumer electric bill will go down under the Clean Power Plan. I'm just talking about the Clean Power Plan, and the reason for that is the consumers will be using less energy under the Clean Power Plan than they will be without the Clean Power Plan.

So even under the conservative accounting of the EPA, and it is conservative accounting, the slight uptick in cost per unit will be offset significantly by reduced actual consumption.

Our analysis—Public Citizen's analysis shows that that is true not just for the Nation as a whole but in every single State. In every single State, consumer electric bills will decline under the Clean Power Plan.

I should say as well that we retrospectively that costs are overestimated. The Wall Street Journal talking about the mercury rule noted that some industry trade groups has argued that the mercury rule would prompt blackouts and skyrocketing electricity prices. Already we know by 2015 that neither scenario had materialized due largely to increased production of natural gas. Again, we see cost estimates oversold.

If you look at the clean air rules you also see that key benefits are not captured in the EPA's regulatory impact analyses and that they often don't take the best choice in terms of advancing net benefits for society, choosing instead to focus on lowering cost, even though they are forsaking benefits for the American people.

Looking at the rules—the actual rules that are issued by the EPA—the Clean Power Plan, mercury rule, the ozone rule—actually you see that the rulemaking process is slower than the aggregate statistics I discussed earlier suggests because the EPA is so slow to begin rulemaking in the first place. The ozone rule is notable. But we just got issued a rule that was required actually under statute to initially be issued in 2002.

And last, I think it's worth saying in the EPA context, as you look at the science and you look at the actual rulemaking, what is apparent is that the EPA massively trails the science.

The EPA is not acting nearly fast enough or nearly aggressively enough based on what the science says and its statutory obligations.

Thank you very much.

[The prepared statement of Mr. Weissman follows:]

Written Testimony of
Robert Weissman
President, Public Citizen
before the
Subcommittee on Energy and Power of the
The House of Representatives Committee on Energy and Commerce
on
“A Review of EPA's Regulatory Activity During the
Obama Administration: Energy and Industrial Sectors”
July 6, 2016



Mr. Chairman and Members of the Committee,

Thank you for the opportunity to testify today on regulatory policy issues. I am Robert Weissman, president of Public Citizen. Public Citizen is a national public interest organization with more than 400,000 members and supporters. For 45 years, we have advocated with some considerable success for stronger health, safety, consumer protection, environmental and other rules, as well as for a robust regulatory system that curtails corporate wrongdoing and advances the public interest.

Public Citizen chairs the Coalition for Sensible Safeguards (CSS). CSS is an alliance of more than 75 consumer, small business, labor, scientific, research, good government, faith, community, health and environmental organizations joined in the belief that our country's system of regulatory safeguards provides a stable framework that secures our quality of life and paves the way for a sound economy that benefits us all. Time constraints prevented the Coalition from reviewing my testimony in advance, and today I speak only on behalf of Public Citizen.

Over the last century, and up to the present, regulations have made our country stronger, better, safer, cleaner, healthier and more fair and just. Regulations have made our food supply safer; saved hundreds of thousands of lives by reducing smoking rates; improved air quality, saving hundreds of thousands of lives; protected children's brain development by phasing out leaded gasoline; saved consumers billions by facilitating price-lowering generic competition for pharmaceuticals; reduced toxic emissions into the air and water; empowered disabled persons by giving them improved access to public facilities and workplace opportunities; guaranteed a minimum wage, ended child labor and established limits on the length of the work week; saved the lives of thousands of workers every year; protected the elderly and vulnerable consumers from a wide array of unfair and deceptive advertising techniques; ensured financial system stability (at least when appropriate rules were in place and enforced); made toys safer; saved tens of thousands of lives by making our cars safer; and much, much more.

The benefits of rules adopted during the Obama administration, as with rules adopted during the Bush administration, vastly exceed the costs, even when measured according to corporate-friendly criteria. This is especially true for environmental rules adopted by the Obama administration in the energy and industrial sectors, though the administration has been slow to act and has forsaken net benefits for our country in the interest of reducing cost.

To review the facts of how environmental regulation in the energy and industrial sector strengthens our country is also to identify the need for significant regulatory reform, including reducing endemic regulatory delay.

The first section of this testimony argues that regulatory benefits vastly exceed costs, that regulation is not a significant cause of job loss and that regulatory costs are regularly and significantly overestimated. The second section reviews the rulemaking experience with the three recent environmental energy rules: the mercury/MATS rule, the ozone rule and the Clean Power Plan. It shows that they will confer tremendous benefits on society; that cost-benefit analyses systematically underestimate benefits and overestimate costs; that the rulemaking process is characterized by delay; and that rulemaking significantly trails what science tells us we should be

doing. The third section of this testimony presents highlights from a just-completed Public Citizen study on rulemaking and regulatory delay. It shows that the regulatory process is broken, such that it takes a full presidential term to issue major rules, and that the rulemaking process has become notably slower during the Obama administration. The final section concludes with a recommendation for Congress to focus on how to improve the rulemaking process, starting with an examination of how to reduce harmful delay.

I. Environmental Regulations are Economically Smart

A. Regulatory benefits vastly exceed costs

Rhetorical debates and cost-benefit abstractions can obscure the dramatic gains our country has made due to regulation. Among many other achievements, environmental regulation has:

- Made it safer to breathe, saving hundreds of thousands of lives annually.¹
- Protected children's brain development by phasing out leaded gasoline and dramatically reducing average blood levels.²
- As part of an international treaty, led to the phase out of ozone-depleting chemicals, facilitating the recovery of the stratospheric ozone layer and a projection of 280 million skin cancers in the United States averted, and 1.6 million skin cancer deaths prevented.³

These are not just the achievements of a bygone era. Regulation continues to improve the quality of life for every American, every day. Ongoing and emerging problems and a rapidly changing economy require the issuance of new rules to ensure that America is strong and safe, healthy and wealthy. Consider just two environmental and energy rules issued by the Obama administration:

- **Fuel efficiency standards.** Pursuant to the Energy Policy and Conservation Act, the Energy Independence and Security Act and the Clean Air Act, the National Highway Safety and Transportation Agency and the Environmental Protection Agency have proposed new automobile and vehicular fuel efficiency standards. The new rules, on an average industry fleet-wide basis for cars and trucks combined, establish standards of 40.1 miles per gallon (mpg) in model year 2021, and 49.6 mpg in model year 2025. The agencies estimate that fuel savings will far outweigh higher vehicle costs, and that the net benefits to society from 2017-2025 will be in the range of \$311 billion to \$421 billion. The auto industry was integrally involved in the development of these proposed standards, and supports their promulgation.
- **Energy efficiency standards.** Pursuant to the Energy Security and Independence Act, the Department of Energy has proposed energy efficiency standards for a range of products, including Metal Halide Lamp Fixtures, Commercial Refrigeration Equipment,

¹ Clean Air Act rules saved 164,300 adult lives in 2010. In February 2011, EPA estimated that by 2020 they will save 237,000 lives annually. EPA air pollution controls saved 13 million days of lost work and 3.2 million days of lost school in 2010, and EPA estimates that they will save 17 million work-loss days and 5.4 million school-loss days annually by 2020. See U.S. Environmental Protection Agency, Office of Air and Radiation. (2011, March). *The Benefits and Costs of the Clean Air and Radiation Act from 1990 to 2020*. Available from: <<http://www.epa.gov/oar/sect812/feb11/fullreport.pdf>>.

² EPA regulations phasing out lead in gasoline helped reduce the average blood lead level in U.S. children ages 1 to 5. During the years 1976 to 1980, 88 percent of all U.S. children had blood levels in excess of 10µg/dL; during the years 1991 to 1994, only 4.4 percent of all U.S. children had blood levels in excess of that dangerous amount. Office of Management and Budget, Office of Information and Regulatory Affairs. (2011). *2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*. Available from: <http://www.whitehouse.gov/sites/default/files/omb/inforeg/2011_cb/2011_cba_report.pdf>.

³ Stratospheric Protection Division, Environmental Protection Agency, Updated Ozone Calculations and Emissions Profiles for Use in the Atmospheric and Health Effects Framework Model, February 27, 2015, available at: https://www.epa.gov/sites/production/files/2015-11/documents/ahef_2015_update_report-final_508.pdf.

and Battery Chargers and External Power Supplies, Walk-In Coolers and Walk-In Freezers, Residential Clothes Washers.⁴ The Department of Energy estimates the net savings from implementation of the Energy Security and Independence Act to be \$48 billion - \$105 billion (in 2007 dollars).⁵

Although most regulations do not have economic objectives as their primary purpose, in fact regulation is overwhelmingly positive for the economy. It is worth underscoring this point, because concerns about particular rules or that the rulemaking process is unfair to regulated industry are usually rooted in economic arguments.

While regulators commonly do not have economic growth and job creation as a mission priority, they are mindful of regulatory cost, and by statutory directive or on their own initiative typically seek to minimize costs; relatedly, the rulemaking process gives affected industries ample opportunity to communicate with regulators over cost concerns, and these concerns are taken into account. To review the regulations actually proposed and adopted is to see how much attention regulators pay to reducing cost and detrimental impact on employment. And to assess the very extended rulemaking process is to see how substantial industry influence is over the rules ultimately adopted—or discarded.

There is a large body of theoretical and non-empirical work on the cost of regulation, some of which yields utterly implausible cost estimates. There is also a long history of business complaining about the cost of regulation—and predicting that the next regulation will impose unbearable burdens. More informative than the theoretical work, anecdotes and allegations is a review of the actual costs and benefits of regulations, though even this methodology is significantly imprecise and heavily biased against the benefits of regulation. Every year, the Office of Management and Budget analyzes the costs and benefits of rules with significant economic impact. The benefits massively exceed costs.

The principle finding of *OMB's draft 2015 Report to Congress on the Benefits and Costs of Federal Regulation* is:

The estimated annual benefits of major Federal regulations reviewed by OMB from October 1, 2004, to September 30, 2014, for which agencies estimated and monetized both benefits and costs, are in the aggregate between \$216 billion and \$812 billion, while the estimated annual costs are in the aggregate between \$57 billion and \$85 billion. These ranges are reported in 2001 dollars and reflect uncertainty in the benefits and costs of each rule at the time that it was evaluated.⁶

⁴ List of Regulatory Actions Currently Under Review. Available from: <<http://www.reginfo.gov/public/jsp/EO/eoDashboard.jsp>>.

⁵ U.S. Department of Energy. (2007). *Energy Independence and Security Act of 2007 Prescribed Standards*. Available from: <http://www1.eere.energy.gov/buildings/appliance_standards/m/eisa2007.html>.

⁶ Office of Management and Budget, Office of Information and Regulatory Affairs. (2015). *Draft 2015 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*, pp. 1-2. Available at: https://www.whitehouse.gov/sites/default/files/omb/inforeg/2015_cb/draft_2015_cost_benefit_report.pdf.

In other words, even by OMB's most conservative accounting, the benefits of major regulations over the last decade exceeded costs by a factor of more than two-to-one. And benefits may exceed costs by a factor of 15.

These results are consistent year-to-year as the following table shows.

Total Annual Benefits and Costs of Major Rules by Fiscal Year (billions of 2001 dollars)⁷

Fiscal Year	Number of Rules	Benefits	Costs
2001	12	22.5 to 27.8	9.9
2002	2	1.5 to 6.4	0.6 to 2.2
2003	6	1.6 to 4.5	1.9 to 2.0
2004	10	8.8 to 69.8	3.0 to 3.2
2005	12	27.9 to 178.1	4.3 to 6.2
2006	7	2.5 to 5.0	1.1 to 1.4
2007	12	28.6 to 184.2	9.4 to 10.7
2008	11	8.6 to 39.4	7.9 to 9.2
2009	15	8.6 to 28.9	3.7 to 9.5
2010	18	18.6 to 85.9	6.4 to 12.4
2011	13	34.3 to 98.5	5.0 to 10.2
2012	14	53.2 to 114.6	14.8 to 19.5
2013	7	25.6 to 67.3	2.0 to 2.5
2014	13	8.1 to 18.9	2.5 to 3.7

The reason for the consistency is that regulators pay a great deal of concern to comparative costs and benefits (even though there is, we believe, a built-in bias of formal cost-benefit analysis against regulatory initiative⁸; see further comments below). Very few major rules are adopted where projected costs exceed projected benefits, and those very few cases typically involve direct Congressional mandates.

It should also be noted that relatively high regulatory compliance costs do not necessarily have negative job impacts; firm expenditures on regulatory compliance typically create new jobs within affected firms or other service or product companies with which they contract.

⁷ Office of Management and Budget, Office of Information and Regulatory Affairs. (2015). *Draft 2015 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*. Table 1-4, pp. 20-21. Available at: https://www.whitehouse.gov/sites/default/files/omb/info/2015_cb/draft_2015_cost_benefit_report.pdf. ; 2001-2004 data from: Office of Management and Budget, Office of Information and Regulatory Affairs. (2011). *2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*. Table 1-3, p. 19-20. Available at: http://www.whitehouse.gov/sites/default/files/omb/info/2011_cb/2011_cba_report.pdf.

⁸ See, e.g., Shapiro, S. et al., *CPR Comments on Draft 2010 Report to Congress on the Benefits and Costs of Federal Regulations* 16-19 (App. A, Pt. C.) (2010), Available from: http://www.progressivereform.org/articles/2010_CPR_Comments_OMB_Report.pdf; Steinzor, R. et al., *CPR Comments on Draft 2009 Report to Congress on the Benefits and Costs of Federal Regulations* 16-19 (App. A, Pt. C.) (2009), Available from: http://www.progressivereform.org/articles/2009_CPR_Comments_OMB_Report.pdf.

B. Job Loss Claims are Not Empirically Supported

Moreover, the empirical evidence also fails to support claims that regulation causes significant job loss. Insufficient demand is the primary reason for layoffs. In extensive survey data collected by the Bureau of Labor Statistics, employers cite lack of demand roughly 100 times more frequently than government regulation as the reason for mass layoffs!⁹ (Unfortunately, in response to budget cuts, the BLS ceased producing its mass layoff report in 2013.)

Reason for layoff: 2008-2012¹⁰

	2008	2009	2010	2011	2012
Business Demand	516,919	824,834	384,564	366,629	461,328
Governmental regulations/intervention	5,505	4,854	2,971	2,736	3,300

It is also the case that firms typically innovate creatively and quickly to meet new regulatory requirements, even when they fought hard against adoption of the rules.¹¹ The result is that costs are commonly lower than anticipated.

C. Cost Estimates Are Routinely and Regularly Inflated

This point cannot be overstated: Industry consistently overstates the cost of pending regulation.

It should not be controversial to recognize that corporations have a natural bias to overestimate cost of rules that may affect the way they conduct business. As a result, while there is a long history of industry claiming that the next regulation under consideration would unreasonably raise the cost of doing business, those claims routinely prove to be overblown.

- Bankers and business leaders described the New Deal financial regulatory reforms in foreboding language, warning that the Federal Deposit Insurance Commission and related agencies constituted "monstrous systems," that registration of publicly traded securities constituted an "impossible degree of regulation," and that the New Deal reforms would

⁹ U.S. Department of Labor, Bureau of Labor Statistics. (2012, November). *Extended Mass Layoffs in 2011. Table 5. Reason for layoff: extended mass layoff events, separations, and initial claimants for unemployment insurance, private nonfarm sector, 2009-2011*. Available from: <<http://www.bls.gov/mls/mlsreport1039.pdf>>.

¹⁰ U.S. Department of Labor, Bureau of Labor Statistics. (2012, November). *Extended Mass Layoffs in 2011. Table 5. Reason for layoff: extended mass layoff events, separations, and initial claimants for unemployment insurance, private nonfarm sector, 2010-2012*. Available from: <<http://www.bls.gov/mls/mlsreport1043.pdf>>. U.S. Department of Labor, Bureau of Labor Statistics. (2013, September). *Extended Mass Layoffs in 2011. Table 4. Reason for layoff: extended mass layoff events, separations, and initial claimants for unemployment insurance, private nonfarm sector, 2009-2011*. Available from: <<http://www.bls.gov/mls/mlsreport1039.pdf>>; U.S. Department of Labor, Bureau of Labor Statistics. (2011, November). *Extended Mass Layoffs in 2010. Table 6. Reason for layoff: extended mass layoff events, separations, and initial claimants for unemployment insurance, private nonfarm sector, 2008-2010*. Available from: <<http://www.bls.gov/mls/mlsreport1038.pdf>>.

¹¹ Mouzoon, N., & Lincoln, T. (2011). *Regulation: The Unsung Hero in American Innovation*. Public Citizen. Available from: <<http://www.citizen.org/documents/regulation-innovation.pdf>>.

"cripple" the economy and set the country on a course toward socialism.¹² In fact, those New Deal reforms prevented a major financial crisis for more than half a century—until they were progressively scaled back.

- Chemical industry leaders said that rules requiring removal of lead from gasoline would "threaten the jobs of 14 million Americans directly dependent and the 29 million Americans indirectly dependent on the petrochemical industry for employment." In fact, while banning lead from gasoline is one of the single greatest public policy public health accomplishments, the petrochemical industry has continued to thrive. The World Bank finds that removing lead from gasoline has a ten times economic payback.¹³
- Big Tobacco long convinced restaurants, bars and small business owners that smokefree rules would dramatically diminish their revenue—by as much as 30 percent, according to industry-sponsored surveys. The genuine opposition from small business owners—based on the manipulations of Big Tobacco—delayed the implementation of smokefree rules and cost countless lives. Eventually, the Big Tobacco-generated opposition was overcome, and smokefree rules have spread throughout the country—significantly lowering tobacco consumption. Dozens of studies have found that smokefree rules have had a positive or neutral economic impact on restaurants, bars and small business.¹⁴
- Rules to confront acid rain have reduced the stress on our rivers, streams and lakes, fish and forests.¹⁵ Industry projected costs of complying with acid rain rules of \$5.5 billion initially, rising to \$7.1 billion in 2000; ex-ante estimates place costs at \$1.1 billion to \$1.8 billion.¹⁶
- In the case of the regulation of carcinogenic benzene emissions, "control costs were estimated at \$350,000 per plant by the chemical industry, but soon thereafter the plants developed a new process in which more benign chemicals could be substituted for benzene, thereby reducing control costs to essentially zero."¹⁷
- The auto industry long resisted rules requiring the installation of air bags, publicly claiming that costs would be more than \$1000-plus for each car. Internal cost estimates actually showed the projected cost would be \$206.¹⁸ The cost has now dropped

¹² Lincoln, T. (2011). *Industry Repeats Itself: The Financial Reform Fight*. Public Citizen. Available from: <<http://www.citizen.org/documents/Industry-Repeats-Itself.pdf>>.

¹³ Crowther, A. (2013). *Regulation Issue: Industry's Complaints About New Rules Are Predictable -- and Wrong*. p.8. Available from: <<http://www.citizen.org/documents/regulation-issue-industry-complaints-report.pdf>>

¹⁴ *Regulation Issue: Industry's Complaints About New Rules Are Predictable -- and Wrong*. p.10.

¹⁵ Environmental Protection Agency. *Acid Rain in New England: Trends*. Available from: <<http://www.epa.gov/region1/eco/acidrain/trends.html>>.

¹⁶ The Pew Environment Group. (2010, October). *Industry Opposition to Government Regulation*. Available from: <http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Industry%20Clean%20Energy%20Factsheet.pdf>.

¹⁷ Shapiro, I., & Irons, J. (2011). *Regulation, Employment, and the Economy: Fears of job loss are overblown*. Economic Policy Institute. Available from <<http://www.epi.org/files/2011/BriefingPaper305.pdf>>.

¹⁸ Behr, P. (August 13, 1981). U.S. Memo on Air Bags in Dispute. Washington Post.

significantly below that. The National Highway Traffic Safety Administration estimates that air bags saved 2,300 lives in 2010, and more than 30,000 lives from 1987 to 2010.¹⁹

There is a long list of other environmental examples from the last century—the CFC phase out, asbestos rules, coke oven emissions, cotton dust controls, strip mining, vinyl chloride²⁰—that teach us to be wary of Chicken Little warnings about the costs of the next regulation.

Industry over-estimates of cost matters both for political reasons and because regulated industry typically has an undue influence over cost estimates, in large part because it controls access to internal corporate information, as well as because of its ability to commission studies that tend to support the interest of their funders. This information asymmetry is a significant problem in the conduct of cost-benefit analysis, including because businesses may not provide important cost information or disclose methodological assumptions in their submitted cost estimates.²¹

Cost calculations also are frequently too high because they tend to rely on static estimates of cost, based on existing technologies and business systems. But industry and our national economy is characterized by technological dynamism, and compliance costs regularly fall quickly once new rules are in place. Many of the examples above illustrate this point, and there are many others. Indeed, regulation spurs innovation and can help create efficiencies and industrial development wholly ancillary to its directly intended purpose.

Looking at a dozen emissions regulations in 1997, Hodges found that early estimates of cost were at least double subsequent estimates or actually realized costs. (Interestingly, the Hodges study found that while emissions reductions estimated or actual costs fell dramatically over time, costs for clean-up typically exceeded estimates—underscoring the case for preventative regulation.)²²

“Part of the reason for the error” of repeated overestimations of regulatory cost, Hodges found “is that, over time, process and product technologies change. An estimate of the cost of compliance with a particular regulation might be based on one technology while actual compliance costs are based on another.” Once business must respond to implemented regulations, they stop bemoaning them and work to do so as efficiently as possible; technological innovation, learning by doing, and economies of scale routinely cut costs far below initial estimates.²³

¹⁹ National Highway Traffic Safety Administration. (2012). Traffic Safety Facts: Occupant Protection. Available from: <<http://www.nrd.nhtsa.dot.gov/Pubs/811619.pdf>>.

²⁰ *Regulation Issue: Industry's Complaints About New Rules Are Predictable -- and Wrong*; Hodges, H. (1997). *Falling Prices: Cost of Complying With Environmental Regulations Almost Always Less Than Advertised*. Economic Policy Institute. Available from: <<http://www.epi.org/publication/bp69>>; Shapiro, I., & Irons, J. (2011). *Regulation, Employment, and the Economy: Fears of job loss are overblown*. Economic Policy Institute. Available from: <<http://www.epi.org/files/2011/BriefingPaper305.pdf>>.

²¹ Ruttenberg, R. (2004). *Not Too Costly, After All: An Examination of the Inflated Cost Estimates of Health, Safety and Environmental Protections*. Available from <<https://www.citizen.org/documents/ACF187.pdf>>.

²² Hodges, H. (1997). *Falling Prices: Cost of Complying With Environmental Regulations Almost Always Less Than Advertised*. Economic Policy Institute. Available from: <<http://www.epi.org/publication/bp69>>

²³ Hodges, H. (1997). *Falling Prices: Cost of Complying With Environmental Regulations Almost Always Less Than Advertised*. Economic Policy Institute. Available from: <<http://www.epi.org/publication/bp69>>

A decade ago, in a detailed report prepared for Public Citizen, Ruttenberg cited a series of factors that explained how technological dynamism led to actual costs far below those estimated in cost-benefit analysis:

- Cost-benefit analyses routinely exhibit inaccurate assumptions about the compliance path industry actually follows once new standards are in place;
- Cost-benefit analyses regularly fail to consider new adaptations of existing technologies to meet new standards;
- Cost-benefit analyses generally do not consider the positive effects of learning by doing and economies of scale;
- Cost-benefit analyses often fail to considering adaptations to technology already in place in other industries; and
- Cost-benefit analyses typically fail to account for new innovations that follow from new regulatory standards.²⁴

Ruttenberg highlights the case of vinyl chloride as an illustrative case study. When OSHA began developing a new health standard to reduce the risk of workers developing liver cancer, the industry claimed that the new standard threatened to “shut down” the industry and estimated costs on the order of \$65-90 billion. Once the standard was in place, industry quickly implemented six technological changes—ranging from improved housekeeping to reduce exposures to new computerized production processes that reduced exposures and saved money—within 18 months. Retrospective analyses of costs placed them at far below 1 percent of industry’s pre-rule analyses, with actual costs placed at between \$25 million to \$182 million, depending on how costs are calculated.²⁵

Finally, although numerous business trade association papers suggest to the contrary, capital-intensive compliance costs do not continue to accumulate in perpetuity. When a new standard is in place, industry invests in improvements or new capital equipment to comply with new rules, after which costs are generally not recurring. (There are, to be sure, ongoing compliance costs in some instances, notably for ongoing reporting requirements, but those typically do not involve costs at the scale of regulations requiring significant capital investments.) One piece of evidence in this regard is that while industry regularly and aggressively contests new rules, at least in the health, safety and environmental areas, it does not continue to complain about rules once they are well established.²⁶

²⁴ Ruttenberg, R. (2004). Not Too Costly, After All: An Examination of the Inflated Cost Estimates of Health, Safety and Environmental Protections. Available from <<https://www.citizen.org/documents/ACF187.pdf>>. pp 22-32.

²⁵ Ruttenberg, R. (2004). Not Too Costly, After All: An Examination of the Inflated Cost Estimates of Health, Safety and Environmental Protections. Available from <<https://www.citizen.org/documents/ACF187.pdf>>. pp 32-33.

²⁶ Lincoln, T. (2014, September 16.) Streamlining the Rules-Making Process. The Hill. Available from: <<http://thehill.com/blogs/congress-blog/the-administration/217751-streamline-the-rules-making-process>>.

II. Environmental Rulemaking in Energy and Industrial Sectors during the Obama Administration

Although there is a perception that the Obama administration has issued a record number of regulations, in fact the administration has issued a comparable, if slightly lower, number of major rules than the two preceding administrations. Major rules are down about 10 percent under the Obama administration.²⁷

That said, the Obama administration has completed a number of important environmental rules in the energy and industrial sectors. As noted above, a number of these rules advance efficiency in the motor vehicle and industrial sectors, and will achieve enormous cost-saving, health and environmental gains for America. Here, I briefly consider three other energy and industrial rules: The mercury (MATS) rule, the ozone rule, and the Clean Power Plan.

Assessing these three rules in tandem illustrates important patterns in rulemaking generally, as well as patterns specific to the environment and energy arenas.

First, even using the conservative accounting of cost-benefit analysis, these rules will confer immense net benefits on society.

Second, cost-benefit analysis is failing to capture huge portions of the benefits of these rules, often excluding key benefits that are part of the very rationale for rulemaking in the first place. This systematic exclusion of benefits means the system is biased to inaction and affording insufficient protections.

Third, even based on identified costs and benefits, the government often fails to adopt the most protective standards available – even when they would achieve higher net benefits for society – because of cost considerations.

Fourth, major rules from the EPA are accompanied by a staggering – nearly paralyzing – amount of justifying technical information.

Fifth, the government is achingly slow to act on major rules. In the following section of my testimony I present new data on this point, but the narrative discussion here shows that the story is far worse than suggested by the data I present. Not only does the rulemaking process take far too long, but years and sometimes decades of delay are embedded in the failure of the government to initiate the rulemaking process.

Finally, environmental rulemaking in the energy and industrial sectors trails available science – including the EPA's science – by years or decades. The stingy regulatory approach of the EPA means that America is not afforded the degree of health and environmental protection it should be.

²⁷ Public Citizen, *Unsafe Delays: An Empirical Analysis Shows That Federal Rulemakings To Protect the Public Are Taking Longer Than Ever*, June 28, 2016, available at: <http://www.citizen.org/documents/Unsafe-Delays-Report.pdf>.

A. The Mercury/MATS Rule

In 2000, the EPA proposed to regulate mercury under the Clean Air Act Section 112. Five years later, the agency issued mercury control rules for mercury under Section 111, aiming to reduce national mercury emissions from 48 to 15 tons annually. Those rules were challenged in court by environmental organizations and subsequently invalidated by the D.C. Appeals Court in 2008, on the grounds that the EPA had improperly removed oil- and coal-fired electric generating units from regulation under Section 112.²⁸ The environmental groups argued that the EPA had failed to meet a mandatory deadline for issuing updated hazardous air pollutant rules for oil- and coal-fired plants by 2002. In 2010, the EPA entered into a consent decree, agreeing to issue new rules. In 2011, the EPA proposed and, after adjustments in response to 700,000 public comments, later made final mercury and air toxics standards (MATS) for oil- and coal-fired electric plants, requiring that they adopt maximum achievable control technologies, as required under the Clean Air Act. The final rules apply to roughly 1,600 power plants and will reduce mercury emissions by roughly 90 percent, as well as significantly cutting a range of other toxic emissions.

The MATS standards will make America healthier and economically stronger. Every year, according to EPA analyses, the rules will prevent:²⁹

- 4,200 to 11,000 premature deaths,
- 2,800 cases of chronic bronchitis,
- 4,700 heart attacks,
- 130,000 cases of aggravated asthma
- 5,700 hospital and emergency room visits,
- 6,300 cases of acute bronchitis,
- 140,000 cases of respiratory symptoms,
- 540,000 days when people miss work, and
- 3.2 million days when people must restrict their activities.

In connection with issuance of the final rule, the EPA published a Regulatory Impact Analysis that was more than 500 pages long.³⁰ The analysis found that benefits of the rule would yield annual benefits between \$33 billion and \$90 billion, as against compliance costs of \$9.6 billion a year. Beyond the normal uncertainties associated with cost-benefit analysis, this analysis had significant limitations and flaws, most or all of which tended to undercount benefits. First, as is common, it discounted the value of lives saved and health impacts averted in the future. Yet while it makes sense to discount monetary costs and benefits, there is no reason to treat a life saved in the future as worth less than one saved today. Moreover, to illustrate how small changes in assumptions can override whatever purported evidentiary basis is included in cost-benefit analyses, consider the impact of changing the applied discount rate: moving from a 3 percent to 7

²⁸ *State of New Jersey v. Environmental Protection Agency* (D.C. Circuit, 2008), available at: [https://pacer.cadc.uscourts.gov/internet/opinions.nsf/68822E72677ACBCD8525744000470736/\\$file/05-1097a.pdf](https://pacer.cadc.uscourts.gov/internet/opinions.nsf/68822E72677ACBCD8525744000470736/$file/05-1097a.pdf).

²⁹ Environmental Protection Agency, "Fact Sheet: Mercury and Air Toxics Standards for Power Plants," December 2011, available at: <https://www.epa.gov/sites/production/files/2015-11/documents/20111221matssummaryfs.pdf>.

³⁰ Environmental Protection Agency, Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards, December 2011, available at: <https://www.epa.gov/sites/production/files/2015-11/documents/matsriafinal.pdf>.

percent discount rate wipes out as much as 90 percent of the anticipated health benefits from reduced mercury emissions in the analysis (p. 4-67). Second, analysts were unable to capture key benefits of the rule. The EPA did not quantify key welfare benefits of the rule: reductions in damage to ecosystems, improved visibility and improvements in recreational and commercial fishing, agricultural yields, and forest productivity. Nor was the agency able to quantify very significant health benefits expected through reduced ozone, nitrogen dioxide and sulfur dioxide. Indeed, the agency was only able to quantify a fraction of the expected benefit from reducing mercury pollution – reduced IQ loss in children from exposure to recreationally caught fish. The EPA analysis notes that recreational fish accounts for only about 10 percent of domestically consumed fish.

The EPA's rule was challenged by 23 states and others. In 2015, in *Michigan v. EPA*, the U.S. Supreme Court ruled that the EPA erred in deciding to issue a rule without first conducting a cost analysis.³¹ On remand, an appellate court declined to issue a stay while the EPA conducted a cost analysis. The agency published a supplemental finding in April 2016, concluding that, by any of several independent analytic approaches, costs were reasonable in light of the substantial benefits.³²

Perhaps the most telling commentary on both the supplemental finding and the overall industry attack on the mercury rule was contained in a Wall Street Journal news report on the EPA's supplemental finding:

Most utilities have already complied with the rule, making Friday's analysis more important for legal rather than substantive purposes. In one sign that stakeholders have moved on, EPA received just 39 comments as it prepared the updated analysis, compared with nearly one million comments when the rules were being written.

Some industry trade groups had argued that mercury rule would prompt blackouts and skyrocketing electricity prices. Neither scenario has materialized, due largely to the increased production of natural gas, which unlike coal produces no mercury and whose price has dropped sharply since 2008.³³

B. The Ozone Rule

The Clean Air Act requires the Environmental Protection Agency to establish and periodically review National Ambient Air Quality Standards (NAAQS) for pollutants harmful to health and the environment, including ground-level ozone. Breathing ozone can cause serious lung problems, and ozone harms vegetation. The EPA failed to issue new, statutorily mandated standards in 2002, resulting in litigation that permitted the agency to delay issuing new standards

³¹ *Michigan v. EPA*, 576 U. S. ____ (2015).

³² Environmental Protection Agency, Supplemental Finding That It Is Appropriate and Necessary To Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units; Final Rule, Federal Register, Vol. 81, No. 79, April 25, 2016, 24420, available at: <https://www.gpo.gov/fdsys/pkg/FR-2016-04-25/pdf/2016-09429.pdf>.

³³ Amy Harder, "EPA Defends Cost of 2015 Mercury Rules in Updated Analysis," Wall Street Journal, April 15, 2016, available at: <http://www.wsj.com/articles/epa-defends-cost-of-2015-mercury-rules-in-updated-analysis-1460734705>.

until 2008. In 2008, the EPA issued updated ozone rules, including both a primary standard directed to protecting public health and a secondary standard aiming to protect public welfare, including limiting adverse environmental effects. The 2008 standard set a .075 primary and secondary standard, measured as parts per million (ppm) over 8-hour exposure.

Public health and environmental organizations challenged the 2008 standard on the grounds that it was insufficiently protective, as based on the scientific findings of the agency's Clean Air Scientific Advisory Committee. That litigation was stayed while the Obama administration set out to issue a new rule early in its first term.

In 2011, the EPA proposed an updated standard, which – in keeping with the agency's scientific advisory committee's recommendations as to safe levels – would have reduced levels of .060-.070 ppm. The Obama White House rejected this proposal.³⁴ This was a decision directly responsive to an industry lobby campaign, channeled through then-White House Chief of Staff William Daley, described by the New York Times as “the administration's conduit for business interests,” and not reflective of existing science.³⁵

Eventually, the D.C. Circuit upheld the primary rule but ruled that the EPA had not adequately explained how the secondary standard provided the required level of public welfare protection.

In December 2014, acting per the Clean Air Act requirement for five-year NAAQS standards, the EPA proposed new ozone standards. After a notice-and-comment period and public hearings, the agency issued final ozone standards in October 2015, setting both primary and secondary permissible levels at .070, and resolving the litigation over the 2008 standard.³⁶ The evidentiary basis for the new standard included an Integrated Science Assessment, Health and Welfare Risk and Exposure Assessments and a Policy Assessment – really, an astounding volume of technical material.³⁷

The benefits of the new standard will be substantial. The EPA estimates that, excluding California,³⁸ the new standards will, among other health benefits, save as many as 600 lives a year, avert 230,000 incidents of asthma exacerbation and prevent 160,000 lost school days.³⁹

³⁴ John Broder, “Obama Administration Abandons Stricter Air-Quality Rules,” New York Times, September 2, 2011, available at: http://www.nytimes.com/2011/09/03/science/earth/03air.html?_r=2&ref=environmentalprotectionagency.

³⁵ John Broder, “Re-election Strategy Is Tied to a Shift on Smog,” New York Times, November 16, 2011, available at: <http://www.nytimes.com/2011/11/17/science/earth/policy-and-politics-collide-as-obama-enters-campaign-mode.html>.

³⁶ Environmental Protection Agency, National Ambient Air Quality Standards for Ozone; Final Rule, Federal Register, Vol. 80, No. 206, 65292, October 26, 2015, available at: <https://www.gpo.gov/fdsys/pkg/FR-2015-10-26/pdf/2015-26594.pdf>.

³⁷ See https://www3.epa.gov/ttn/naaqs/standards/ozone/s_o3_index.html.

³⁸ California will be slower to comply and the EPA cautions that benefits and costs for the state should be considered separately from the national aggregate. Annual benefits for California include as many as 200 lives saved, 160,000 incidents of asthma exacerbation averted, and 120,000 lost school days prevented.

³⁹ Environmental Protection Agency, “Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone,” September 2015, available at <https://www3.epa.gov/ttn/naaqs/standards/ozone/data/20151001ria.pdf>.

The EPA also conducted a cost-benefit analysis in connection with the ozone rule. What is most notable about the cost-benefit analysis is that it details how the agency chose neither the most protective rule that science recommends, nor a cost-benefit maximizing rule. Rather, the agency appears to have placed primary emphasis on averting costs. The cost-benefit analysis considered costs and benefits both for a regulatory standard of .070 and .065. According to the analysis, costs are considerably higher at the more protective level, but benefits soar even more. Altogether, according to the analysis, the annual net benefits of the .070 standard range from \$1.5 billion to \$4.5 billion (mean \$3 billion) (inclusive of typical, and inappropriate discounting of future health benefits). The net benefits of the .065 standard range from -\$1.0 to \$14 billion (mean \$6.5 billion) (Table ES-5).

In less technical and more human terms, the decision to go with a less protective standard means the country will tolerate as many as 2500 preventable fatalities every year, 800,000 preventable incidents of asthma exacerbation every year, and 100,000 avoidable lost work days every year (Table ES-6).

C. The Clean Power Plan

Averting catastrophic climate change is the greatest challenge facing humanity. Our government has been shamefully slow in acting to reduce the peril from a threat that could cost millions of lives – or potentially many more, lead to war, famine and pestilence, and disrupt modern civilization. Scientists have warned us about the threat for more than 40 years;⁴⁰ leading oil companies such as Exxon have been aware of the threat for a comparable period;⁴¹ the first popular book on the topic was published more than a quarter century ago;⁴² and the Intergovernmental Panel on Climate Change (IPCC), a UN scientific body of the world's leading climate scientists, published its first comprehensive report more than two decades ago.⁴³

In 1999, 19 public interest organizations, including Public Citizen, petitioned the EPA to regulate greenhouse gas emissions from motor vehicles under Section 202 of the Clean Air Act. In 2003, the EPA denied the petition. The citizen groups, joined by several states, sued to reverse the EPA's decision. In 2007, the U.S. Supreme Court overturned the denial of the petition, holding that "EPA has offered no reasoned explanation for its refusal to decide whether greenhouse gases cause or contribute to climate change."⁴⁴

In June 2014, the EPA finally proposed its Clean Power Plan. In August 2015, it issued a federal plan designed to serve as a model for states to adopt implementation plans. The EPA hosted webinars, held public hearings and received more than 4 million comments on the rule. As with

⁴⁰ Spencer Weart, The Discovery of Global Warming, Scientific American, August 17, 2012, available at: <http://www.scientificamerican.com/article/discovery-of-global-warming>.

⁴¹ Neela Banerjee, Lisa Song and David Hasemyer, "Exxon's Own Research Confirmed Fossil Fuels' Role in Global Warming Decades Ago," Inside Climate News, September 16, 2015, available at: <http://insideclimatenews.org/content/Exxon-The-Road-Not-Taken>.

⁴² Bill McKibben, End of Nature, New York: Anchor, 1989.

⁴³ J.T. Houghton, G.J. Jenkins and J.J. Ephraums (eds.), Intergovernmental Panel on Climate Change, Climate Change: The IPCC Scientific Assessment, New York: Cambridge University Press, 1990, available at: https://www.ipcc.ch/publications_and_data/publications_ipcc_first_assessment_1990_wg1.shtml.

⁴⁴ *Massachusetts v. EPA*, 549 U.S. 497 (2007).

other major rules, the EPA published an astounding amount of technical material in conjunction with the rule.⁴⁵ It finalized the rule on August 3, 2015 and published it in the Federal Register on October 23, 2015.⁴⁶ The rule has been stayed pending judicial review of the agency's action.

The final Clean Power Plan affords very substantial flexibility to states in devising customized plans to meet targets designed to reduce overall emissions of greenhouse gases. The plan is built on three building blocks: (1) reducing the carbon intensity of electricity generation by increasing the operational efficiency of existing coal-fired power plants; (2) reducing the carbon intensity of electricity generation by shifting electricity generation from higher emitting fossil fuel-fired steam power plants (generally coal-fired) to lower emitting natural gas-fired power plants; and (3) reducing the carbon intensity of electricity generation by increasing electricity generation from zero-emitting renewable sources of energy like wind and solar. The rule is designed to reduce carbon dioxide emissions in 2030 by 32 percent below 2005 levels, an important and commendable objective, though far less than science tells us is necessary.

Accompanying the final rule is an incredibly elaborate cost-benefit analysis. The EPA's cost-benefit analysis shows that the rule will deliver tremendous, monetized benefits to America. The exact monetized benefits vary by year and assumption, but climate benefits alone exceed costs in every EPA scenario, and climate benefits plus health co-benefits vastly exceed costs. By 2020, net benefits – subject to standard and inappropriate discounting of climate and health benefits – are expected to be \$25 billion to \$43 billion (Tables ES-9 and ES-10). Benefits are vastly under considered, however, because the EPA was not able to quantify a wide range of benefits:

“Due to current data and modeling limitations, our estimates of the benefits from reducing CO₂ emissions do not include important impacts like ocean acidification or potential tipping points in natural or managed ecosystems. Unquantified benefits also include climate benefits from reducing emissions of non-CO₂ greenhouse gases and co-benefits from reducing exposure to SO₂, NO_x, and hazardous air pollutants (e.g., mercury), as well as ecosystem effects and visibility impairment” (ES-21).

Note that excluded from the EPA calculation are “potential tipping points in natural or managed ecosystems” – exactly the kind of large-scale, unmanageable catastrophe that demands urgent action to address climate change. Or, stated more plainly, the EPA cost-benefit analysis arguably excludes the most important benefits of action.⁴⁷

Concern with the EPA's Clean Power Plan, of course, focuses on the dollar cost to society. But these concerns turn out to be misplaced, for while under the EPA's conservative assumptions there will be some increase in energy generating costs, these will be more than offset by the reduction in energy used thanks to investments in efficiency. As a result, household electricity bills will *fall*, not rise, under the Clean Power Plan.

⁴⁵ <https://www.epa.gov/cleanpowerplan/clean-power-plan-final-rule-technical-documents>.

⁴⁶ Environmental Protection Agency, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, Federal Register, Vol. 80, No. 205, 64662, October 23, 2015, available at <https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22842.pdf>.

⁴⁷ Environmental Protection Agency, Regulatory Impact Analysis for the Clean Power Plan Final Rule, August 2015, available at: <https://www.epa.gov/sites/production/files/2015-08/documents/cpp-final-rule-ria.pdf>.

Public Citizen analyzed the plan's projected impact on household electricity bills in states. We found that, by 2030, household electricity bills will fall in every single state:

The Clean Power Plan offers states a great opportunity to lower electricity bills while curbing climate change. If states follow the course that the EPA envisions for them, then household electricity bills will fall in every state by 2030—and in nearly every state by 2025. These numbers are likely too low, as they incorporate the EPA's admittedly conservative take on energy efficiency. States can and should choose to exceed the EPA's expectations. If a state makes stronger improvements in energy efficiency, and makes them more quickly, then its households will enjoy even greater savings.⁴⁸

⁴⁸ "Clean Power, Clear Savings: The EPA Clean Power Plan Can Cut Household Electricity Bills in Every State," Public Citizen, November 2015, available at: <http://www.citizen.org/documents/Clean-Power-Clear-Savings-Report-November-2015.pdf>.

III. Rulemaking Delays Are Widespread and Getting Worse

There is certainly no dearth of examples and anecdotes showing how long it takes for federal agencies to issue new rules, particularly those rules that provide the biggest benefits to the public in term of health, safety, and financial security. The anecdotes touch virtually every regulatory sector and every agency. Recent examples of long-delayed rules that failed to protect Americans quickly enough include new oil train safety standards, new safety standards for blowout preventers on offshore oil rigs to prevent the next BP Gulf Oil Spill, major new food safety regulations that overhaul our food safety system to prevent rather than just respond to tainted food outbreaks, Wall Street reforms that have yet to be finalized almost 8 years after the financial crash, new pipeline safety standards to prevent pipeline leaks and spills, new energy efficiency standards that save consumers money, new workplace safety protections against known carcinogens like silica dust, and new measures to put money back in the pockets of Americans like the fiduciary rule and the overtime rule. Yet, there has been a notable lack of empirical analysis to identify both the length of these delays and the extent of the delays across different agencies. Last month, Public Citizen unveiled a ground-breaking report aimed at filling this void.

The report, entitled *Unsafe Delays*,⁴⁹ examines regulatory delays by collecting and analyzing one of the most comprehensive data sets of rulemaking actions to date. Our report gathered data on all rules listed in the Unified Agenda over the last 20 years, from the first Unified Agenda available electronically in 1995 to the most recent, spring 2016 Unified Agenda. In total, we studied a total of 24,311 rulemakings, of which 18,146 were actually completed. The picture of delay that emerges from the report is deeply troubling and highlights the dysfunction in our regulatory system – dysfunction that impedes regulatory agencies from acting to carry out congressionally assigned responsibilities and to protect Americans.

Overall, we found that the rules that are most important to protecting the environment as well as the public's health, safety, and financial security were also the rules that took the longest to finalize and encountered the most delays in the regulatory process. On the other hand, routine or technical rules that were not considered "significant," which comprised the vast majority of all rulemakings, encountered few delays and were usually finalized in a fairly efficient manner. In other words, the "economically significant" rules subject to the most procedural requirements in the rulemaking process are also the rules with the greatest delays.

It may not be surprising that rules which must go through more steps in the rulemaking process will take longer, but what is striking and worrisome is the extent of the delay we found.

- Overall, the average length of rulemakings for all economically significant rules is 2.4 years, 41 percent longer than the overall age for all rules (1.7) years.

⁴⁹ Public Citizen, *Unsafe Delays: An Empirical Analysis Shows That Federal Rulemakings To Protect the Public Are Taking Longer Than Ever*, June 28, 2016, available at: <http://www.citizen.org/documents/Unsafe-Delays-Report.pdf>. All data, charts and figures in this section of my testimony are drawn from this report. The study is based on data published in the federal government's Unified Agenda of rulemakings, which has been published twice annually in every year but one since 1996. The full methodology is discussed on pages 10-11 of the report.

- Economically Significant rules that required a Regulatory Flexibility Analysis (RFA) took on average 2.5 years to complete.
- Economically Significant rules that began with an Advanced Notice of Proposed Rulemaking (ANPRM) took on average 4.4 years to complete, almost twice as long as Economically Significant rules without ANPRMs.
- Economically Significant rules that included both ANPRMs and RFA analyses took almost five years to complete on average. Hence, the inclusion of major additional procedural requirements leads to substantial additional delay in the rulemaking process.

Number of Rulemakings and Average Length - All Rulemakings Begun and Finished 1996 - 2016

	Number of Rules	Average Rulemaking Length
All Rulemakings	24,311	2.1
Uncompleted	6,165	3.2
Completed	18,146	1.7

Length of Completed Rulemakings (RM) With and Without Inclusion of ANPRM and RFA Analysis

Priority	ANPRM					Non ANPRM				
	RFA Required			No RFA Required		RFA Required		No RFA Required		
	#	Average RM Length	% Longer than non-ANPRM non-RFA	#	Average RM Length	#	Average RM Length	#	Average RM Length	
Economically Significant	24	4.7	114%	27	4.1	235	2.3	450	2.2	
Other Significant	30	4.5	105%	162	3.3	388	2.4	3,319	2.2	
Substantive, Nonsignificant	37	3.3	120%	239	3.1	1,115	1.5	10,577	1.5	

Among the agencies that took the longest to complete Economically Significant rules on average were the Department of Energy (5 years) and the Environmental Protection Agency (3.8 years) (the third and fourth slowest agencies). We also found that important sub-agencies within larger agencies are more prone to substantial rulemaking delays for Economically Significant rules. For example, two EPA sub-agencies, the office of Solid Waste and Emergency response and the Water office, both take longer than 5 years on average to complete Economically Significant rulemakings. Another sub-agency with noteworthy delays for Economically Significant rules is the DOE Energy Efficiency and Renewable Energy (5.1 years).

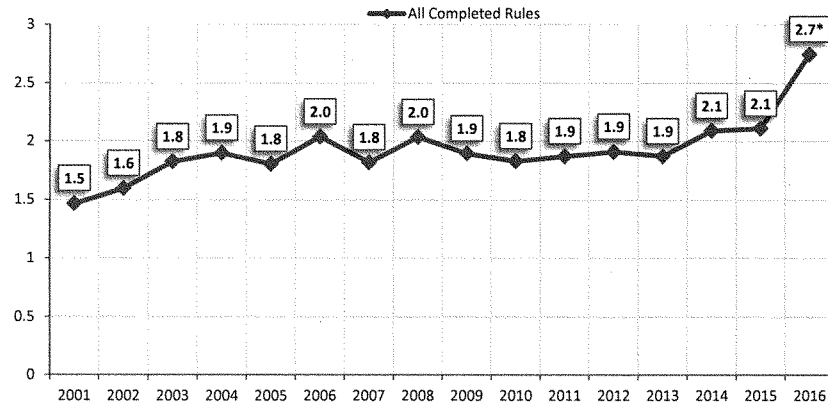
Number and Average Rulemaking (RM) Length of Completed Rules

Agency	Name	Economically Significant		Other Significant	
		#	Average RM Length	#	Average RM Length
DOJ	Department of Justice	6	5.5	173	3.0
DOL	Department of Labor	27	5.4	172	2.7
DOE	Department of Energy	28	5.0	40	2.8
EPA	Environmental Protection Agency	72	3.8	323	2.9
DHS	Department of Homeland Security	22	3.4	91	2.5
TREAS	Department of the Treasury	15	3.3	70	2.0
DOT	Department of Transportation	56	2.9	252	2.9
HUD	Dept. of Housing and Urban Development	8	2.6	166	2.6
USDA	Department of Agriculture	73	2.1	343	2.5
DOC	Department of Commerce	13	1.9	217	1.6
HHS	Department of Health and Human Services	262	1.7	468	2.2
DD	Department of Defense	12	1.7	163	2.0
DOI	Department of the Interior	24	1.5	214	2.4
ED	Department of Education	27	0.9	89	1.2
Other*		91	1.5	1,118	2.0
Total		736	2.4	3,899	2.3

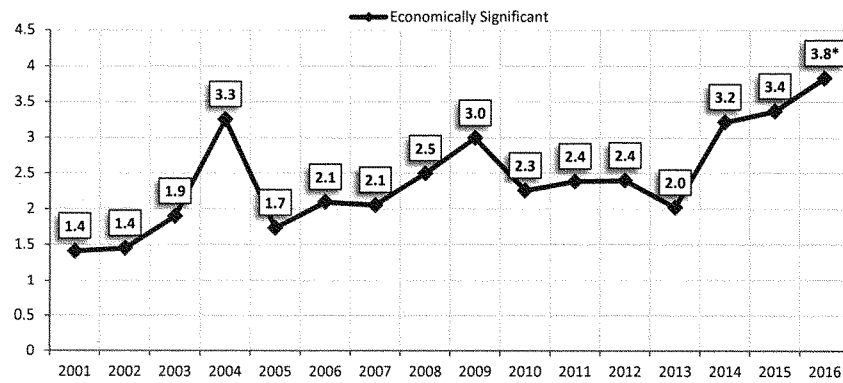
*This category, which includes 67 agencies, regards rulemakings for which the field in the Unified Agenda typically devoted to cabinet level agencies is blank and the agency conducting the rulemaking is listed in the Unified Agenda field normally devoted to sub agencies. Most agencies in this category are independent agencies. Two agencies included in this category – the State Department and Veterans Affairs Department – are cabinet level agencies.

The clear takeaway from our comprehensive empirical research is that many agencies are simply unable to complete Economically Significant rulemakings over the course of one presidential term. Unfortunately, the data in our report also shows that the trend is going in the wrong direction, with regulatory delay increasing. We found that the George W. Bush and Obama Administrations experienced similar rulemaking lengths for their first five years. Beginning in the sixth year of the Obama Administration, completed Economically Significant rulemakings became substantially longer than in the corresponding year in the Bush Administration. Over the last three years, the average length of rulemakings has increased steadily from 3.2 years in 2014 to 3.4 years in 2015 and now 3.8 years this year. In short, the rulemaking delays have reached new heights over the last few years. The data for other types of rules also reflects an increase in rulemaking lengths over the last few years. It has become clear that our current problems with regulatory delay are getting worse.

Length of Completed Rulemakings (in years)



Length of Completed Economically Significant Rules



Years in Which the Average Completed Rulemakings Were the Longest

A. All Completed Rules		
Year	President	Average Rulemaking Length
2016*	Obama	2.745
2015	Obama	2.111
2014	Obama	2.089
2006	Bush	2.038
2008	Bush	2.034
B. Economically Significant Completed Rules		
Year	President	Average Rulemaking Length
2016*	Obama	3.826
2015	Obama	3.363
2004	Bush	3.251
2014	Obama	3.211
2009	Obama	2.990
C. Other Significant Completed Rules		
Year	President	Average Rulemaking Length
2016*	Obama	3.582
2015	Obama	3.027
2014	Obama	3.014
2006	Bush	2.751
2007	Bush	2.636

IV. Conclusion: Strengthening the System of Regulatory Protections to Strengthen America

There is much to celebrate in our nation's system of regulatory protections. It has tamed marketplace abuses and advanced the values we hold most dear: freedom, safety, security, justice, competition and sustainability. It has led to dramatic environmental improvements, saved millions of lives, and averted countless illnesses and injuries. We should celebrate the achievements of regulatory protections.

Recognizing the crucial role that regulation plays in improving our standard of living underscores the importance of ensuring that the regulatory process works well. Regulators should be nimble and flexible, able to act quickly with appropriate new rules in response to changing technologies, new science and social learning, evolutions in industry structure and other emerging trends and developments. At the same time, regulators must effectively enforce new and old rules; they must be adequately funded, equipped with needed regulatory tools including inspection powers and sufficiently tough penalties for lawbreakers, independent from the parties they regulate while maintaining appropriate responsiveness, and guided by leadership with sufficient political will and protected from interference. Unfortunately, those qualities by and large do not describe the current state of the regulatory process or enforcement, and the regulatory system is failing to meet its promise, in the energy and environmental sector and more generally.

In the environmental area and generally, Congress should look to reforms to strengthen regulatory enforcement, stiffen penalties for corporate wrongdoing, speed the rulemaking process, address uneven judicial review of regulations, and adopt pro-competitive rules to level the playing field for small business and improve the economy and consumer well-being.

Combating harmful delay should be a special priority for Congress. Agencies commonly fail to meet congressionally mandated deadlines, and drag out important rulemakings for years or even decades. We have to find a way to make our government more nimble than that. Endemic problem is not easily cured. Congress should look especially at the role of excessive analytic requirements and at the impact of centralized regulatory review in the Office of Information and Regulatory Affairs (OIRA) in slowing regulatory action. One thing is certain: Congress should not impose more analytic requirements and more time-consuming burdens on regulators.

The reason is this: The consequences of delay are serious, with real impacts on real people. Delay creates the regulatory uncertainty that many business spokespeople denounce. Delay also means that lives are needlessly lost, injuries needlessly suffered, environmental harm needlessly permitted, consumer rip-offs extended, and more.

Mr. WHITFIELD. Thank you, Mr. Weissman.

Our next witness is Mr. Charles McConnell, who is the Executive Director for Energy and Environment Initiative at Rice University, and he also was former Assistant Secretary for Fossil Energy at the Department of Energy.

So, Mr. McConnell, welcome, and you are recognized for 5 minutes.

STATEMENT OF CHARLES D. McCONNELL

Mr. McCONNELL. Thank you, Mr. Chairman and members. Glad to be here to testify about the Sections 111(b) and (d) of the Clean Air Act and the Clean Power Plan.

But before I begin, I would like to quote a novelist, Saul Bellow, who said a great deal of intelligence can be invested in ignorance when the need for illusion is deep.

And so for me, that is what is summarized by a lot of what I have heard most of the day today. I got three key issues that I think we need to be real clear about.

One, these EPA rules, specifically the Clean Power Plan, does not serve environmental purposes. Calling this environmental regulation is disingenuous.

Two, we don't have functioning interagency collaboration. I personally witnessed that at the DOE. And three, EPA's proposals actually harm energy sustainability. So the projected chart that hopefully we'll be able to show here will outline what the Clean Power Plan really does.

But I would like to say before we go to that I am not here representing a political agenda or a political point of view. I believe in climate change. I am not a denier. CO₂ is a forcing function for climate change.

It's not solely the forcing function but it is a contributor and I think we have an obligation to do something about CO₂. I served in this administration and believe in these fundamentals. But what we have with this plan, as this chart indicates in front of you, this gives us a worldwide CO₂ concentration reduction of .2 percent.

It is a projected whopping .01 degree impact to global temperature rise, and the sea level reduction impact is the amount equivalent to two human hairs, and it is all offset by three weeks of Chinese emissions. I find this plan stunningly unambitious.

Our EPA Administrator actually acknowledged these facts in testimony but said we should not judge this plan by its ideological global leadership. It's in fact the cornerstone of U.S. climate policy to show the world, and I ask show the world what—that we are willing to make our energy more expensive, less reliable for de minimis CO₂ impact?

The fact that we have seven States bearing 40 percent of this burden? And energy costs will go up. That's according to PUC analysis across the country.

This is a false sense of accomplishment. It is not meaningful climate policy, and I won't sit here and recognize it as such. It's a forced renewable portfolio standard that is a classic case of regulatory overreach.

The EPA is required to seek expertise through interagency collaboration and public notice and comments which actually includes

those actually conducting business. How could this program have been hatched?

Well, I would submit to you that the interagency collaboration is illusionary. I led that office at DOE for 2 years and bore personal witness to any number of circumstances.

An example was a specific request made by EPA of my office to comment on a term they called resourced adequacy. And what is that? It's a theoretical analysis of theoretical installed capacity that might be utilized to provide theoretical system and supply reliability.

It's a term to appear insightful but it really isn't. It's ideological mumbo jumbo.

It's forcing closure of coal and eventually gas generation that we rely on. So why not ask of our PUCs to analyse real reliability and real onstream data? Why not model real reliability performance? I would submit it's because of the inconvenient truths.

EPA rules don't promote real energy sustainability either. We have a framework at Rice that's being broadcast here where we ask three questions—is our energy more accessible, reliable and secure?

Are we making our energy more affordable, cost effective and globally competitive and are we being more environmentally responsible? You got to answer yes to all three, and the CPP fails this miserably.

I think we need to do three things. One, we need to embrace how impactful clean fossil technologies are to our environment. Not focus on shutting down the coal mining industry or the oil and gas industries that we believe in.

The second thing we need to do is to meet these climate goals. We need carbon capture utilization and storage. It has been identified as the IPCC as the most critical technology for the world to meet climate targets and the CPP rules deter it.

And the third thing is we need to encourage public/private partnership to enable new transformative technologies, not obstructing them with burdensome regulation.

Let me close with a quote often attributed to Mark Twain and recently Laurence Peter from the Peter Principles. The question is sometimes I wonder whether the world is being run by really smart people who are putting us on or by imbeciles who really mean it.

Thank you.

[The prepared statement of Mr. McConnell follows:]

Statement of The Honorable Charles D. McConnell
Executive Director, Energy and Environment Initiative
Rice University

Committee on Energy & Commerce
Subcommittee on Energy & Power
Wednesday, July 6, 2016

Thank you, Mr. Chairman and Members of the Committee, for the opportunity to testify on the impact of EPA rules on the energy sector. I will focus in particular on the EPA's rules and proposed rules for new and existing power plants under Sections 111(b) and 111(d) of the Clean Air Act, known respectively as the greenhouse gas new source performance standard (GHG NSPS) and the Clean Power Plan (CPP).

Let me begin by offering a quote by the famous novelist Saul Bellow, who wrote: "A great deal of intelligence can be invested in ignorance when the need for illusion is deep!"

Public servants need to serve the public, and they need to follow the law to do it. The EPA may have forgotten they are to serve the people, not the other way around. That is the only way to explain rulemakings in which collaborations and expert warnings were brushed aside, real energy sustainability downplayed or outright denied, claimed benefits exaggerated, truths ignored, all coincidentally in a way that serves the agency's agenda. Are we also observing a false sense of accomplishment by environmental rule-makers that does nothing substantial to

improve our environment? Yes. And we do it with our EPA Director admitting the rules are not impactful to the environment but are the cornerstone of US environmental leadership to the world. And that we should not judge the Clean Power Plan on its real merits but the fact that the US is showing global leadership. What? This is stunningly uninformed.

I am going to focus on three things:

1. The effects of EPA rules are harmful, in two dimensions:
 - a. The rules do not serve their stated purposes. For example, the climate impact of the CPP is negligible. It will not meaningfully reduce GHG emissions.
 - b. They improperly attempt to subordinate expert federal and State agencies by arrogating to EPA authorities it doesn't have. Rules like the CPP have been falsely sold as environmental regulation, when they are really an attempt by our primary federal environmental regulator to take over federal and State regulation of energy.
2. The EPA does not properly consult with fellow agencies to gain input to understand the effects of their actions. They did as little consulting as possible, as late in the process as possible, to avoid having to address commentary from sister agencies that their proposals would harm the country.

3. The rules damage our framework of energy sustainability and fail the test in all dimensions.

We have a regulatory agency putting the illusion of environmental performance (no improvement) as a totalitarian approach to energy sustainability and ignoring reliability and affordability. The CCP is an abject failure on all fronts.

Before going further, let me be very clear. I believe the climate is changing. CO₂ is a contributor or “forcing function” for climate change – certainly not the exclusive forcing function, but a major contributor – and it requires an energy strategy in this country and globally to address the long term implications. Climate change and the impact of CO₂ is, I believe, scientifically and technically documented and we have an obligation to address them as a society. That does not, however, give the federal government through this agency, license to do whatever it wants.

Harmful Effects of EPA’s Rules

EPA’s Rules Do Not Serve Their Stated Purposes

In recent years, EPA has adopted rules that do not serve their stated purposes. The mercury rule provided very little benefit from mercury reduction, as EPA itself acknowledged. Similarly, it is clear both scientifically and technically, that the EPA’s CPP is not a plan that will significantly impact global CO₂ emissions. If the definition of “clean” were the reduction of atmospheric CO₂ levels – and that would be a narrow, incorrect perspective – then this CPP is not even really clean, because it is neither relevant nor impactful in reducing CO₂ emissions and improving our environment.

For one thing, let's look at the nuclear plants that are closing. Industry urged the EPA to take a logical approach and allow nuclear energy generated after a license was extended to count as clean energy under the CPP. In power markets heavily impacted with subsidized renewables, there is no guarantee that nuclear owners can afford to keep running their plants and would seek license extensions. Giving them credit for zero emitting energy would have helped. EPA said no, and in just the few months since the CPP was issued we've seen at least eight nuclear units announce they are shutting down.¹ How are we going to replace this energy? At least some of it will be from fossil sources – probably gas – so emissions will actually go up not down. Many have accepted gas as a temporary “bridge fuel” that is considered “better than coal”, so for the time being they find this tolerable, but if this were all really about emissions rather than about an ideology that opposes coal and nuclear (and eventually all fossil fuels including gas), we could have a rule that promotes all types of low-emission and emission-free energy.

One form of low-emission – and potentially emission-free or emission-negative – energy is carbon capture, utilization and storage, or CCUS. The 111(b) rule put forth an emission standard for new coal-fired power plants based on “partial CCS” – capturing about 25% of the CO₂ emissions of a supercritical coal-fired power plant and sequestering those emissions underground. This may sound like progress, but mandating a technology that hasn't yet been proven and burdening it up with draconian regulatory consequences should it not perform, will simply discourage people from choosing this option. EPA says this is a “technology forcing” section of the Clean Air Act, and while the technology hasn't been proven yet, EPA is just

¹ FitzPatrick, announced February 2016; Pilgrim, announced April 2016; Fort Calhoun, announced May 2016; and Clinton, Quad Cities 1 and 2, and Diablo Canyon 1 and 2, announced June 2016. The Nuclear Energy Institute has stated that some 20 other nuclear units are at risk of closing. These few plants alone produce enough electricity to meet almost 10% of the Clean Power Plan's 2030 414 million ton CO₂ reduction target.

helping it along by requiring it? This is illogical on many fronts. I don't know of anyone who would consider implementing transformative technology in a coal plant with CCS at the same time the government would impose penalties on them if the technology didn't work. This is technology stifling regulation, not technology promoting implementation and deployment that the IPCC has declared to be the most important tactical technology to mitigate CO₂ emissions to the atmosphere and reduce GHG emissions globally. Without global adoption of CCS and CCUS, there can be no conceivable way to meet climate change targets.

DoE has made it plain that CCUS (Carbon Capture Utilization and Storage) technologies are not ready for commercial deployment, and has published numerous materials showing CCUS will be ready for broad commercial deployment – *assuming* proper funding and continued technical progress – in the 2025 time range. Fewer people will invest in CCUS if, when new reliable power is needed, their choices are 1) an immature technology with no performance history and a burdensome regulatory structure, or 2) an off-the-shelf technology – natural gas – that has a well-known risk profile and less regulation. DoE has spent years working to help industry develop CCUS for power plants, but EPA decided for its own reasons that the technology was “ready enough” to require people to implement. A number of people told the EPA that regulation would stifle CCUS investment, but EPA did not listen. This is classic passive-aggressive behavior to stifle CCUS deployment and damages the potential for clean fossil fuel technology development.

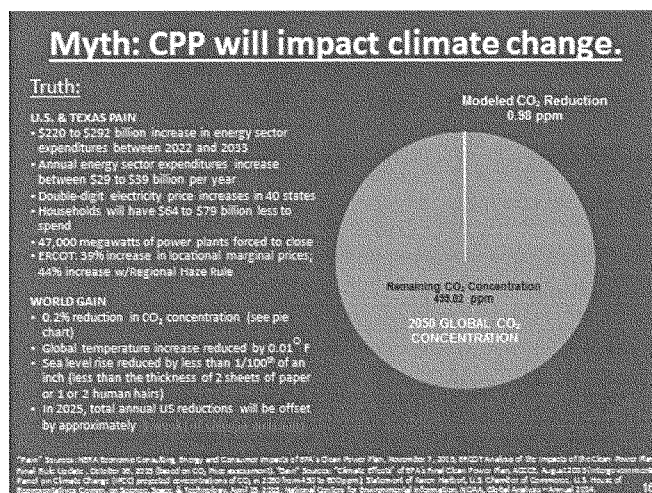
Also, under both the 111(b) and CPP rules, EPA required that CO₂ sent to oil fields to increase oil production should be reported under a greenhouse gas reporting provision known as Subpart RR. This is so the EPA can verify that the CO₂ is staying in the ground, not escaping into the

atmosphere. What policy makers need to understand is that oil companies have been pumping CO₂ into oil fields to produce oil for almost 45 years, and other than minor equipment leaks generally understood to be far less than 1% of the total CO₂ volume, CO₂ is injected underground and stays underground. What the Subpart RR reporting rule does, however, is unnecessarily complicate oil production. It requires producers to develop an EPA-approved monitoring, reporting and verification (MRV) plan that could require producers to stay in the oil field longer than they're allowed to under state law. Currently, one CO₂-EOR company has gotten a MRV plan approved, and I commend them for doing it. But why are we treating a molecule of CO₂ from a power plant more onerously than a naturally-occurring CO₂ molecule from a regulatory perspective? We have decades of experience to know the CO₂ stays in the formation, regardless of where it comes from. EPA's reporting requirement for CO₂ in CCUS will not accelerate a technology to positively impact our environment. It will slow or stop adoption, create risk and stifle deployment.

America needs to take leadership on clean fossil fuels. We are the best positioned country in the world to do so. We are leaders in technological innovation, and we have natural resources that can only be developed with CO₂, such as oil in residual oil zones that can be produced only with CO₂. This requires us to develop CCUS, and anyone paying attention knows the world will not meet its CO₂ reduction targets without it. We can build all the windmills and solar panels we want, but by 2035 the world is going to have another 1.6 billion people on it. That is five times the population of the United States. Primary energy consumption is going to rise by 37% between 2013 and 2035. Fossil fuels are still going to supply the vast majority of energy across the globe, and almost all of that growth is going to come from non-OECD countries. We must

have CCUS – and this is validated by the IPCC report that points out that CCUS is the single most important global technology to mitigate GHGs and positively impact the climate.

I have testified previously that the CPP reduces the amount of anthropogenic CO₂ globally by 0.2% (modeled to be less than 1 ppm), that the projected global temperature increase would be reduced by 0.01°F, and that the avoided sea level rise would be 1/100th of an inch, which equates to the width of two human hairs. These are facts, and facts are stubborn things. All of this insignificant impact, which would not even get underway in the U.S. until perhaps 2025 because of the stay of the CPP, will be offset by three weeks of Chinese emissions. And this is US global leadership and the “cornerstone of US climate policy?” I think not – but the illusion is deep!



EPA's Rules Attempt to Subordinate Energy Regulators

The CPP has been falsely sold as environmental regulation when it is really an attempt by an environmental regulator to take over the energy sector. Specifically the energy market sector of the seven states that bear over 40% of the CPP burden of reduction because they are the “makers” of energy. The States that are the “takers” in our US market bear little or no societal responsibility.

State energy regulators historically have made decisions such as whether a utility may build and operate a new generation facility. Part of what has gone into that decision has been consideration of fuel diversity. Utilities felt that both reliability and affordability were enhanced if they had generating facilities of various types, so that if there were supply disruptions or cost spikes in one kind of fuel they could moderate the impact by increasing operation of other types of generators. This is why over the decades, natural gas-fired generators have typically been “peaking” units. Gas was an expensive fuel, or at least very price-volatile, so such facilities were built with the idea that they would run mostly during periods of peak demand. That has changed, of course, as gas prices have been consistently low due to the advent of transformative technology.

The point is that the CPP fundamentally changes the nature of decision-making about operating power plants – who makes the decision, and on what basis. In restructured energy markets, States have passed laws essentially determining that the least expensive generators should

operate first.² Type of generation is not the driving force, as long as the energy can be provided reliably. The CPP elevates point source generation technology carbon dioxide emissions over cost and often these point sources cannot be fossil fueled by regulation. The key energy generating states must reduce their carbon emissions by as much as 40%, regardless of whether this means that less expensive, reliable generators must shut down. EPA gets final approval of a State's plan, which would be developed by a State's environmental regulators, not the state energy regulators. In other words, which power plants can run and when would no longer be a matter primarily of energy regulation, but of environmental regulation.

One might ask, haven't we long had environmental regulations that apply to power plants, and if so, how is the CPP any different? It is different precisely because of the illegal "flexibility" EPA put in the rule. It is one thing for an environmental regulator to say I can't run a power plant unless I install pollution control equipment. It is fundamentally different, for that regulator to say I can only run the plant a certain amount of the time, and to decide what type of power plant (from an emissions profile) has to run in its place. This displaces energy regulators and makes environmental regulations comprehensively controlling.

There is another point to put the CPP power grab into context. Under the Federal Power Act, FERC has jurisdiction over interstate transmission and "the sale of [electric] energy at

² This is true in a "market price" sense, not a true "cost of production" sense. Many generators, such as renewables, are heavily subsidized through government policies such as the Section 45 tax credit, and therefore are able to bid into markets at prices far below other competitors. In many markets, for example, wind energy bids in at \$0 or less to ensure that it is dispatched, so that it can receive the \$23/MWh tax credit, which is nearly equivalent to the market price in some areas. Such subsidies artificially depress the prices all generators receive.

wholesale,”³ including matters “affecting” rates or charges for electricity. In *FERC v. Electric Power Supply Association*,⁴ decided earlier this year, the Supreme Court addressed the issue of how far FERC’s jurisdiction over matters affecting rates could extend. The Court said “Taken for all it is worth, that statutory grant could extend FERC’s power to some surprising places. . . . [M]arkets in just about everything – the whole economy, as it were – might influence [electricity] demand.” Therefore the Court limited the extent of FERC’s “affecting” jurisdiction. It said “a non-hyper literal reading is needed to prevent the statute from assuming near-infinite breadth,”⁵ In *PPL EnergyPlus v. Solomon*,⁶ the Third Circuit Court of Appeals essentially said the same thing: federal energy jurisdiction has limits. “[W]ere we to determine otherwise, the states might be left with no authority whatsoever to regulate power plants because every conceivable regulation would have some effect on operating costs or available supply.”⁷

It would be astonishing if Congress intended that the FERC, the federal agency tasked with energy regulation, expressly does not have authority over power sales to consumers, but intended that the EPA can essentially force some generators to turn off their power plants and buy power from lower-emitting competitors.

The CPP is in effect a mandated federal renewable portfolio standard, which steps on your power as elected legislators. Congress refused to enact a renewable energy standard, half the States have declined to adopt one, but now we have an unelected federal agency, not responsible for energy, imposing one. This led renowned legal scholar Laurence Tribe, President Obama’s

³ 16 U.S.C. 824(a).

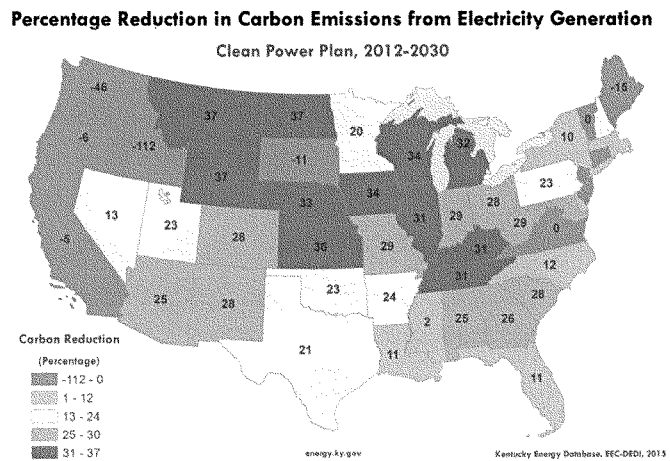
⁴ 577 U.S. ___, 2016.

⁵ *Id.*, at 15.

⁶ 766 F.3d 241, 2014.

⁷ *Id.*, at 257.

Constitutional Law professor at Harvard, to testify last year before this committee that “Burning the Constitution should not become part of our national energy policy.”



- Slide Courtesy of Len Peters, Secretary of Energy and Environment,
Commonwealth of Kentucky

EPA Consultation

Agencies are encouraged, and in fact required to, consult with one another when they are preparing to propose a rule that has impacts on commerce or expertise within the responsibility of another agency. We have rules for this, including Executive Order 12866, which was signed by President Clinton.

There are good reasons for thoughtful interagency review. We live in a time of tremendous complexity and interrelationships in the spheres of human activity. Adopting a rule that might shut down a power plant – let alone a rule like the CPP that EPA itself says will shut down 23 GW of coal-fired generation – has broad impacts. When power plants close, people are out of work. Coal mines close – maybe nearby, maybe elsewhere – and more people are out of work. No coal, and the railroad jobs decline. When all those jobs disappear, local government revenues drop. This is happening across many parts of the country right now with coal plants and even zero-emitting nuclear plants.⁸

Interagency collaboration brings experts from other agencies into the process so effects like these can be minimized. A rule that would impact coal might attract interagency suggestions to build in features to encourage carbon capture, utilization and storage, for example. A rule that would result in many power plants closing could impact electric reliability, and therefore cost, as expensive transmission-side upgrades are required to keep service reliable. Electricity has been deemed a vital service such that reliability impact is a matter an agency would want to evaluate early in the process. Energy agencies are adept at evaluating that. FERC and DoE have the expertise to advise EPA on such matters, but in my experience EPA has not properly consulted nor given sufficient weight to the advice of these agencies, or for that matter other experts in the

⁸ See, e.g., "Pike County, Ky. facing more than \$5 million budget deficit," May 16, 2016, accessed at <http://www.wsaz.com/content/news/Pike-County-Ky-facing-more-than-5-million-budget-deficit-379741471.html>; "Officials expect 20 to 25 county employees to lose their jobs. They are looking for other ways to save money, including cutting funding for programs."; and "Oswego school budget to cut jobs, sports: 'Heart-wrenching' for everyone," May 18, 2016, accessed at http://www.syracuse.com/schools/index.ssf/2016/05/oswego_school_budget_crisis_heartwrenching_cuts_for_everyone.html. "The Oswego City board of education adopted a \$79 million budget for the 2016-17 school year that cuts about 50 positions and eliminates all modified sports and cuts some junior varsity and varsity sports teams, including football."

energy industry. One problem is that when an Administration elevates one priority, like promoting renewables, over things like electric affordability and reliability, the agencies with expertise in those other priorities have a weakened interagency voice often to the point of silence.

When the EPA was hatching the CPP, I witnessed the EPA asking the Office of Fossil Energy, which I ran at the Department of Energy, to comment only on an EPA-defined concept of resource adequacy – not reliability. Why? Were they afraid of inconvenient truths? For those wondering what “resource adequacy” means, it means – in theory – that there is more capacity to generate power than predicted demand. But the real measure we are concerned with isn’t theoretical resource adequacy. It’s reliability – whether that power is available where it’s needed, when it’s needed, and available on a constant basis. This is the kind of linguistic mumbo jumbo often offered by EPA, meant to sound like a thoughtful theoretical framework for analysis. It is theoretical, but it is surely not useful.

Reliability means reliability. Available power means available power, not design capacity that is theoretically available. When wind can only be expected to be available in reality about 10-15% of the time, cloaking reliability considerations under a phrase like “resource adequacy” as a required term through which EPA directed DoE’s comments to be directed in the stilted interagency collaboration charade I witnessed, devalues the truth. However, it does allow EPA to claim disingenuously that there has been interagency consultation. It was not in my view legitimate interagency consultation because it was deliberately structured to avoid input that would highlight the rule’s potential damage to electric reliability.

EPA also did not properly consult with DoE on the costs of the CPP. Neither the National Energy Technology Laboratory nor the Office of Electricity Delivery and Energy Reliability were consulted properly regarding the proposed rule's impact on the levelized cost of electricity or the all-in costs of the rule – i.e., not just counting increased generation costs, but costs to consumers and others from back up generation for intermittent renewables, cost of having to cycle baseload plants and the likelihood of increased costs of repairs, cost of needed transmission upgraded, cost of extended operation and maintenance, service costs, and others.

EPA apparently has no compunction, even when it disregards expert input that conflicts with its narrative, when it is proven wrong in spectacular fashion that puts the public in danger, and its actions are subsequently struck down in court. This is the scenario of the Mercury and Air Toxics Rule, on which rule this Committee held a number of hearings. EPA claimed – again after scant interagency review – that only 4 GW of power plants would shut down as a result of the rule. Well, here we are today and some 60-70 GW of coal-fired generation has shut down, nearly 20 times what the EPA estimated. I would like to thank Senator Murkowski and this Committee for calling on the FERC to step up its reliability consultation for future rules, rather than let its silence serve as a rubber stamp for weakening grid reliability.

Every credible entity who commented on this rule told EPA they were grossly under-estimating the damage they were about to do. AEP's CEO Nick Akins later testified that 90% of the plants slated for closing as a result of the MATS rule had to operate during the polar vortex, during which a blackout was only very narrowly avoided. By the time the Supreme Court rule EPA's

actions to be illegal, generation owners had already decided to shutter their plants. When an agency minimizes outside marketplace and interagency input and dismisses the foremost experts when the damning truth conflicts with the agency's agenda, it is a disservice to – and a gross disregard of – the public.

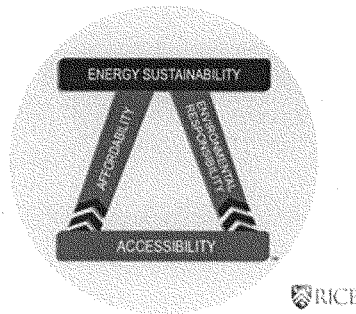
Damage to Energy Sustainability

The cascade of environmental rules we have seen during this Administration has weakened energy sustainability. Before going further, let me define what we at Rice University and our Energy and Environmental Initiative mean by sustainability. “Sustainable” means energy is *accessible* – meaning not only that we have secure and steady access to the energy source to make it, but that it can produce consistently available, “always on” power; *affordable*, which means we are not causing consumers undue financial strain and we are globally competitive for manufacturing; ; and *environmentally responsible*. I submit to you that every major source of energy we have today can be used in an environmentally responsible manner through the implementation and broad adoption of the transformative technologies we as a country have been interested in and promote for worldwide deployment.

The CPP is not sustainable. It will cause double digit electricity price increases in 40 states, not to mention the hidden costs to society.



Energy Sustainability Framework



The CPP is nothing more than a forced renewable portfolio standard to substitute renewable energy for fossil fuels. At least it would be procedurally defensible if Congress made that choice, after weighing costs, need for transmission upgrades, stranded costs from diminished use of generation assets, reliability impacts, and job impacts. But it still would not be impactful environmental policy. Understand that today, renewables must be backed up by a fast-ramping, reliable, “always on” power source, which today means natural gas. That subjects ratepayers to the assumption that natural gas costs will remain constant, an increasingly high risk proposition with the EPA aggressively attacking natural gas fracking technology. So, while we push out coal and expect natural gas to be our energy savior, the same administration is driving regulatory cost and burden higher to make it more expensive.

Finally, as to the legality of the rule. I’m no lawyer, but I am a citizen. It is a threat to democracy that an agency would take the plain enacted words of Congress, “best system of

emission reduction . . . adequately demonstrated,” and attempt to claim *not only* that it no longer means what the agency and regulated companies have always relied on it meaning – a cleanup technology installed and proven to work at their type of industrial facility – but that “system” now means something the elected First Branch of government that enacted it never conceived: that a federal environmental regulator has carte blanche authority over whose power plants are allowed to run in the United States. EPA’s legal insurrection allowed it to set an emission reduction level no cleanup technology has yet been demonstrated to meet. And again, it will not even have a significant environmental impact.

Science and technology requires real understanding and real analysis. The CPP is not worthy of that as it simply does not meet the test of impactful environmental regulation. The EPA’s unauthorized expedition into energy policy is nothing short of disturbing.

So let me close with a quote I would ask us to consider: It is often attributed to Mark Twain and most frequently used by Laurence Peter – another of the Peter Principle:

“Sometimes I wonder whether the world is being run by smart people who are putting us on – or by imbeciles who really mean it.”

Mr. WHITFIELD. Thank you, Mr. McConnell. I appreciate that.

At this time, I would like to recognize the gentleman from Texas, Mr. Olson, for 5 minutes of questioning.

Mr. OLSON. I thank the chairman, and welcome to our five witnesses. I hope you enjoyed the fireworks show from the first panel on July 6th the way I did.

A special howdy to the chairman of the Texas Railroad Commission, David Porter, who I found out was born at the same hospital I was, the Madigan Army Hospital in Fort Lewis, Washington, many months before I was born, with all due respect.

And also a special howdy to Chuck McConnell, the executive director of the Energy Environment Initiative at my alma mater, Rice University. Wise old owls are always welcome here.

For Chairman Porter, Mr. Kavulla and Mr. Helms, the regulators on our panel, could you describe the—well, first of all, you have been in the position of having to implement EPA's regulations that address real world issues that either are unknown, crop up. It is out of control.

My question is for all three of you, starting with you, Chairman Porter. Can you describe the impact you think the methane rules have on Texas energy production and, more broadly, can you say anything about Ms. McCabe's testimony that you disagreed with and to which you would like to respond to correct the record, so to speak?

Chairman Porter, you are first at bat, sir.

Mr. PORTER. Definitely, and I address it in my written testimony. But I think the methane emissions rules would be very bad for the oil and gas industry in Texas and one of my biggest concerns is the effect that it would have on the small operators if they really small stripper wells are not exempted from those rules.

Even a relatively large number of wells is represented by the stripper production, which is 10, 15 percent of total production but it still is a viable part of the Texas economy, particularly in the rural areas and small towns are support by the small oil and gas companies that operate there. So the economic impact is huge.

Mr. OLSON. Mr. Kavulla, your comments, sir, about what was raised or anything you want to straighten out with Ms. McCabe's testimony, or a fact check?

Mr. KAVULLA. Yes. Maybe just this persistent assertion that has come up that utility bills will lower in cost, which I don't find to be a credible assertion.

I mean, the premise of environmental regulation, whether you agree with it or not, is that it serves to restrain some kind of economic production to produce public health benefits.

Here there is an assertion that an industry that is in the business of offering its production, sometimes in competitive markets but other times under the regulation of PUCs, on a least cost basis is not obtaining economic efficiencies that you expect them to obtain.

I don't think it's credible to say that consumers would just save money if an environmental regulator would stage an intervention into the market. To me, that doesn't make sense, and if true it means that utility commissions everywhere are not doing their jobs

at which I know them for a fact to be requiring the low cost acquisition of energy efficiency as a matter of law.

Mr. OLSON. And Mr. Helms, back to you. I heard your comments in your opening statement about the methane emissions so I'm going to talk to Mr. McConnell.

In your testimony you mentioned that many of EPA's rules fall short. They don't live up to the promises. That is something I have touched on a lot in recent hearings.

Can you talk about the impact of the Clean Power Plan, how will that impact? Does it hit the target? Or as you put the slide up here, is it way off base?

Mr. McCONNELL. It's wrapped up to be climate legislation. But in fact, as you can see from the chart, it doesn't do anything about the climate. I think, Mr. Congressman, in my view, the climate story is being written globally.

Really, much outside the United States, in places like China we saw a chart earlier today with all the coal plants being developed all over the world, that's a reality. That is not something the EPA is going to stop. That is going to happen.

And so for the United States to be a global leader we need to provide global technology leadership, not global ideological leadership with a plan that's wrapped up to be something that it isn't, to punish ourselves for no climate benefit.

Mr. OLSON. Amen. I was just in China and we saw their reports in the local press. They're building new power plants they know they don't need. They just want the jobs, more coal emissions. So, again, it's a global challenge. It's not just America's. Let's take care of our country first. I yield back.

Mr. WHITFIELD. The gentleman yields back. At this time, I recognize the gentleman from Illinois, Mr. Rush, for 5 minutes.

Mr. RUSH. I want to thank you, Mr. Chairman.

Mr. Weissman, I am quite interested in your views about the delays within the regulatory agency that is assigned to protect the American people.

And you stated in your testimony that there have been more regs under the Obama administration than under the Bush administration. Did I hear you correctly?

Mr. WEISSMAN. No. Actually, about 10 percent fewer regulations under President Obama than President Bush.

Mr. RUSH. Fewer then. But in regards to the delays, what do you think that we should be doing about the delays?

Mr. WEISSMAN. Well, it is—

Mr. RUSH. What?

Mr. WEISSMAN. Yes, it is a confounding problem. I think the single source—single primary source of delay is excessive analytical requirements. So the Agency is to issue rules.

If you actually look at the technical material they put out it's astounding in its volume and unfortunately there are several proposals in Congress to add analytical requirements, which would worsen the delay problem.

So I think the first thing to look at is how to pare back some of the analytic requirements and the second is to hone in on the role of the OIRA, the Office of Information and Regulatory Analysis, and see how OIRA can be forced at minimum to adhere to the

standard that the—to the schedule standards that it's supposed to abide by. It routinely does not turn rules around according to the schedule it's required to under the executive order.

Mr. RUSH. What does—what is the impact when the rules are designed to protect the environment and public health, safety and financial security and then there are also the regulations that are taking the longest to finalize and experience the most delays in the regulatory process, what is the impact on the community?

Mr. WEISSMAN. Yes. It is quite severe. For one thing, just as a business matter it's harmful because of—the biggest problem for industry turns out to be regulatory uncertainty, not knowing what the rules of the game are. Once the rules are established industry actually is pretty adept and nimble at adapting.

But in terms of—but we also lose over time the benefits of those regulations. So, for example, the mercury standard is projected to save between 4,000 and 11,000 lives every year—every year.

If we wait 3 years, we are losing 12,000 lives. And we might not know who the names of those people are, but they are real people. They are not statistical abstractions.

Mr. RUSH. So are you saying, then, there is very little that we can do as a Congress to try to remove some of the delays and the hindrances to getting these rules and these regulations before the American people quicker?

Mr. WEISSMAN. No, I think there is a lot that Congress could do if it were so inclined. I would focus a lot on the role of OIRA and holding that agency to account to make sure it speeds the process and it does not needlessly and inappropriately delay a rule.

I would look at the level of analytic requirements and reduce what agencies are required to do and I would also look at the problem of revolving door where people go from the regulated industry into the regulatory agency and then back to the regulated industry.

I think that revolving door creates a culture where agencies are inclined to go slow because they are overly sympathetic to the regulated industry of which they once were a part of and may be seeking employment with in the future.

Mr. RUSH. I want to thank—Mr. Chairman, I yield back.

Mr. WHITFIELD. The gentleman yields back. At this time, the chair recognizes himself for 5 minutes of questions.

You know, from the questions of Ms. McCabe, I think it was quite obvious to everyone that there is a lot of emotion about this issue and when we talk about the Clean Power Plan, I think Mr. McConnell really touched on an important point, and that is that the result of the Clean Power Plan is so minute that it's almost meaningless.

And yet, it's being pushed by the administration worldwide and made a big deal of at the Paris agreement. We signed the agreement, we implement this to fulfill our responsibility.

So it appears the U.S. is being a leader in addressing climate change. But in reality, not anything is measurably being done to climate change and yet the U.S. is really being punished.

And one of the problems that I have had with the Clean Energy Plan is the tortuous route that EPA went through to give itself the power to do what it was trying to do. And historically, in the U.S., the States, through the public power commissions, the utility com-

missions or whatever, which you represent, Mr. Kavulla, have had this authority to deal with the energy issues.

And Ms. McCabe today responded oh, this is not a regulation about energy—it's a regulation about emissions.

But in reality, this does give EPA authority to determine what power is being used in the power plants. Is that your impression, Mr. Kavulla?

Mr. KAVULLA. Mr. Chairman, I would agree with that characterization, yes. I think fundamentally because the rule does not rely on an assumption about a particular pollution control technology being the benchmark for the emission standard that is set for the emitting plants, and it instead relies on assumptions that coal plants will produce less often if there is simply more wind and natural gas, that it is essentially a regulation on the energy system broadly.

Mr. WHITFIELD. And Mr. Porter, would you agree with that characterization?

Mr. PORTER. I would.

Mr. WHITFIELD. And Mr. Helms, would you?

Mr. HELMS. Very definitely, and when you look at the methane reduction rules, Mr. Chairman, when you look at them policing the fact that you've got to get a Title 5 permit now for every multi-well horizontal drilling pad, you now have the environmental regulators deciding when and where oil and gas wells are going to be drilled as opposed to the oil and gas regulators.

Mr. WHITFIELD. And Mr. McConnell, would you agree with that characterization?

Mr. MCCONNELL. Yes, I would, and we talked a lot this morning about flexibility and how it's really flexible. Well, that is disingenuous. It is not flexible.

If you look at the thresholds and you look at the technologies and fuels associated with those thresholds it makes you choose wind or solar, period.

You don't have an option in particularly the seven States that are bearing 40 percent of the load of the responsibility.

Mr. WHITFIELD. Yes. And Mr. Weissman may not agree with this characterization but we all recognize the benefit of the Clean Air Act and we all understand the importance of the impact on health.

But this is fundamentally changing the way we regulate energy production in America and I think that is one of the main reasons why the Supreme Court issued a stay because it was kind of done under guise of darkness and no one really focused on it, certainly not the public because it's so complicated.

Some of you mentioned in your testimony how complex this is. And so that is the only point that I would make, and I'll yield back the balance of my time and recognize Mr. Green for 5 minutes of questioning.

Mr. GREEN. Thank you, Mr. Chairman. I want to thank the chair of the Texas Railroad Commission. Having served 20 years in the State legislature, I appreciate the work you do, and also Charles McConnell, who we flew up yesterday on the plane and what you do at Rice University and we talked—I'm on the other side of town. I have the University of Houston. So we are glad to partner with Rice on lots of things.

I want to apologize to the panel. We actually have a conference committee going on on our main floor, so some of us are coming in and out during the hearing for votes and issues on that.

But Chairman Porter, in your testimony, you raised concerns about the regulation of low production well sites. Just last week, the U.S. Energy Information Administration stated low production wells, or as we call them stripper wells, account for approximately 10 percent of U.S. production.

EIA estimated there is approximately 380,000 low production wells operating in the U.S. whereas there are 90,000 non-stripper wells. The production from each well would limit any emissions, however. The sheer volume of wells would raise some concern about the potential impact. Can you explain a bit more about your concerns and why you think EPA should exempt these wells?

Mr. PORTER. The reason I think EPA should exempt these wells, and there are studies being done at this time, is that the impact on each individual well was extremely low because of the volume.

And I think the reason it should be also is the economic impacts on both energy production for the Nation and, of course, the economic impact on the State of Texas and the small communities and the small independent oil men that are the backbone of most of rural Texas would be dramatically impacted by the cost of complying with the same type of emissions standards that you'd have on the large horizontal well at this time.

Mr. GREEN. Well, and I also understand the difference between what traditionally was large horizontal as compared to what we are doing with the fracking in south Texas and even before there, relatively quick wells that you get production out and you move them.

Director Helms, in your testimony, you write that the State of North Dakota is ranked number two in the United States in production of oil and gas and I would like to remind everyone that Texas is still number one, after North Dakota, California and Pennsylvania. So we know a little bit about oil and gas.

Recently, the EPA identified the next issue of area they address as methane from oil and gas production. When I drive through south Texas I see there is no one in the oil and gas sector that wants to see that flaring because that is product going out and the royalty owners and I know the—don't want to see that if they are not getting their royalty on it.

And I also know that the reason companies flare gas is because they lack the infrastructure required to capture it or send it to the market.

Can you talk a little bit about the infrastructure challenges North Dakota faces and how building, gathering lines would help alleviate the issue of methane flaring?

By the way, I have never not lived on a pipeline easement in Houston, Texas in my life and if Texas doesn't have the infrastructure then I don't know of anybody who doesn't but we do have infrastructure problems with those in south Texas.

Can you talk about what North Dakota has been trying to with the gathering lines?

Mr. HELMS. Yes. Thank you, Representative Green.

North Dakota was faced with the largest oil field in the world, the Bakken aerial extent, and it was discovered fairly recently the infrastructure did not exist for gathering and processing the natural gas.

We found ourselves in 2012 flaring 36 percent of the natural gas. We needed to encourage——

Mr. GREEN. Did the State not receive any tax benefit on those either?

Mr. HELMS. Well, no tax benefit, no royalty benefit on flared natural gas. Absolutely. And so we implemented rules through the industrial commission to reduce that natural gas flaring.

I am happy to report it's down to 8 percent now. But the Clean Power Plan and the methane rules are going to interfere directly with North Dakota's plan for reducing its gas flaring by limiting the power that we have available for powering those natural gas processing plants and by changing the configuration of the oil field requiring us to add three to four times as much pipeline in the ground in order to reach these smaller pads that are going to be required under the methane reduction rules.

And so they work exactly counter to the reasonable purpose of reducing flared methane and reducing methane leaks.

Mr. GREEN. Well, did EPA take into consideration, in my last eight seconds, what North Dakota has been doing already in reducing it?

Mr. HELMS. Congressman Green, there was not one single bit of consideration given to our comments with regards to that fact, and therefore we are petitioning them for reconsideration of the rule.

Mr. GREEN. And, again, for the record, it seems like if you are already reducing it and you have a plan that you've done it without EPA why would they not accept it?

Mr. Chairman, I know I'm out of time.

Mr. WHITFIELD. I thank the gentleman. I recognize the gentleman from Ohio for 5 minutes.

Mr. LATTA. Well, thank you, Mr. Chairman, and thanks to the panel for being with us today, this morning, this afternoon. Appreciate it.

Mr. McConnell, if I could ask you the first question. It has been said that carbon capture utilization and storage and enhanced oil recovery might only be a niche in a full scale CO₂ storage opportunity to require much more than EOR geological opportunities.

Is CCUS a niche, or is there a greater opportunity, and just to follow-up on that, if it is a greater opportunity, what kind of actions will it take from us to make the most of this opportunity?

Mr. McCONNELL. Well, clearly, the answer to your second question is we need to encourage the development, set up an infrastructure in this country that actually promotes the development of a technology that needs continual investment in R and D.

But it's interesting, we're talking about research and development and deployment of something that the EPA has already determined to be commercially available and that is also part of disingenuous conversation because if we still have R and D dollars being put against that technology how could it be commercially ready?

It's unimaginable. But to your first question, is it a niche? Absolutely not. I took over at the DOE in 2011 as we had done the national carbon sequestration mapping across this country, looking at storage opportunities.

But I suggested to our national energy technology laboratory that we needed to find where the oil deposits were in this country because that is where we could get economic benefit from carbon capture, utilization and storage and be able to safely and permanently store those CO₂ emissions in that formation.

So you get a perfect two-fer. You get a business development opportunity for jobs, manufacturing and growth and you get a climate benefit.

But instead what we've done is we've looked into these regulations with the EPA now putting onerous responsibilities onto oil and gas operators that is actually slowing the implementation of what the IPCC has already determined to be the most important global technology in our march toward achieving climate targets globally.

There are oil opportunities off the shore of China, off the North Sea, in the Gulf and around the world where this can be deployed and taken globally to make a globally impact.

Mr. LATTA. Thank you very much.

Chairman Porter, I think you have testified before us before. I think you're sitting in the same seat, if I remember correctly. But, you know, I would like to just go back to your testimony because, again, listening to Ms. McCabe's testimony and talking about, you know, going out and talking with a lot of folks around the country.

But you know, looking at your testimony and I know you didn't have a chance to run through some of these but I'm going to just run through a couple of them real quick.

Minimal interaction and consultation with Texas and other State regulatory authorities underestimated or ignored compliance costs, overestimated unjustified exaggerated regulatory environmental benefits, increased regulatory and economic burden on operating companies in a one-size-fits-all.

I don't see from your comments that she must have talked to you. Was there any kind of a cost benefit that was done for the State of Texas of these regulations going into place?

Mr. PORTER. Are you asking about the State of Texas or the Federal Government?

Mr. LATTA. Well, I'm just asking if the State of Texas got consulted with all these different issues that you brought up in your written testimony.

Mr. PORTER. No, not directly. I mean, of course, like everyone else we had the opportunity to make comments and we—the Railroad Commission quite often do make comments on Federal regulations and for the most part they seem to be generally ignored. Occasionally, something is picked up. But—

Mr. LATTA. So you don't think there was much interaction that—or really listening to what you all had put forward to the EPA then?

Mr. PORTER. Not a lot. I will say as far as our interaction between the EPA I was first elected to office in 2010, came in 2011.

Interaction was very unpleasant with the EPA at that point in time between the Railroad Commission.

In the last few years, it has gotten more civil. I'm not saying that they listen to us a lot. But at least the lines of communication are a little more open, and it's a little more civil than it was when I first came into office 5 and a half years ago.

Mr. LATTA. Mr. Helms, how about the same question? Do you have a lot of interaction? Do they listen to you?

Mr. HELMS. Congressman Latta, very little interaction, and as I stated in my comments, none of our recommendations on any of these rules were implemented.

Speaking to the carbon capture and storage, North Dakota is the only State who has applied for primacy. We did that back in June of 2013. We have progressed through the entire process, and our primacy application has been sitting on the Administrator's desk since July 14th of 2014 with no action.

Mr. LATTA. OK. Thank you very much.

Mr. Chairman, my time has expired and I yield back.

Mr. WHITFIELD. I thank the gentleman.

Now I recognize the gentleman from Missouri, Mr. Long.

Mr. LONG. Thank you, Mr. Chairman.

Mr. Kavulla, in Missouri we get 80, 85 percent of our power from coal, just to say that kind of as a precursor here. But you mentioned in your testimony that the EPA has interpreted the Clean Air Act to give it the power to plan the resource mix for U.S. power sector.

Could you expand on this? What does this mean for States having to implement the Clean Power Plan?

Mr. KAVULLA. So in States like Missouri as well as Montana and other heavily coal-dependent States there is no viable pathway to come into compliance with the Clean Power Plan's goal unless you basically build natural gas and renewable infrastructure in order to displace some of your coal output.

That's the premise of EPA's goal setting or requirement process in the regulation and I expect that that would be the pathway toward compliance that most utilities would have to find themselves in unless and until something like carbon capture and sequestration becomes commercially available on a wide scale.

Mr. LONG. Are there any functioning plants right now of carbon sequestration up and running operations? I know when we did this a year, a year and a half ago there weren't any. Are there today?

Mr. KAVULLA. In North America, I believe there might be one in Saskatchewan. There is one potentially coming online that's been the subject of a great deal of media scrutiny recently in Mississippi.

But in general, I wouldn't consider that a commercially available technology. I'll put it this way. I am not aware of any regulated utility or any utility in the competitive sector which is currently proposing to its regulator the adoption of carbon capture and sequestration as the least cost alternative.

Mr. LONG. How about the reliability? Can you discuss the impact of the Clean Power Plan? What effect it will have on electric reliability if many of these coal-fired power plants are shut down to comply?

Mr. KAVULLA. In my view, it could be significant and this is something where interagency consultation was very important and may not have happened as well as it should have between the Federal Energy Regulatory Commission and the EPA.

The FERC is the agency responsible for the reliability of the whole electric system and particularly in those areas, especially in the eastern United States, that rely on competitive wholesale markets to assure enough resources for the reliability of the system. The sudden unavailability of some of those resources with nothing to step into the breach may have real implications.

Mr. LONG. Do you think that the EPA is providing adequate flexibility for States to meet the Clean Power Plan standards and if not what impact is this having for State utility commissions?

Mr. KAVULLA. My own personal view is that they are not. Montana has, as a percentage, the most significant reduction goal—47 percent reduction in carbon dioxide. And frankly, when you have that monumental of a requirement the flexibility is a meaningless concept.

I mean, you can only close down existing coal plants before the end of their useful lifespan in order to comply unless somehow there are available allowances to sell from others. So far, it doesn't necessarily seem that there will be.

Mr. LONG. In the next 5 to 10 years, if the EPA went forward with an updated Clean Power Plan with more stringent standards, what impact would this have on electric reliability?

Mr. KAVULLA. Congressman, it's hard to say. I mean, it's difficult enough to plan just for this regulation, much less anticipate what the EPA may or may not do.

Mr. LONG. I know when southwest Missouri down in the Joplin area whenever I travel and I look at these power plants where they have had to go in and spend hundreds of millions of dollars updating to the latest EPA regulations, which might take 6 to 8 years before you even know if the regulation is going to be implemented or not, it's mind boggling.

And then I'm also reminded of a recent trip that I made to Midland, Texas, to a large oil and gas outfit down there, and, after we toured one of their drilling rigs, got up on top of that and looked at that, we went and drove down this 2-mile—it seemed like 2 miles; not sure it was that long—driveway back into where they gather all the gas and oil and sort it out and truck it out and pipe it out and whatever they are going to do with it.

And there was a herd of cattle there, about 10 head of cattle, in this pretty small area and there was a sheriff's car there. And they said, well, what's the sheriff's car doing. So then they went, people have been rustling our cattle. I thought, how can you rustle 10 head of cattle, you know. But anyway, I said, so what are the cattle—they're kind of in middle of nowhere.

They said, well, that's our example, that those 10 cows put out more methane gas than our entire operation here of oil, gas, drilling, and piping, and sorting it all out.

So I am out of time. I yield back.

Mr. GRIFFITH (presiding). I thank the gentleman and now recognize myself for 5 minutes. Let me do a little clean-up if I can.

Mr. McConnell, you said earlier that the analysis by PUCs across the country show that electric rates would go up for the folks back home. PUC is public utility companies or company?

Mr. McCONNELL. Yes.

Mr. GRIFFITH. Yes. And their data indicates that their electric rates are going to go up under these regulations. Isn't that correct?

Mr. McCONNELL. As much as 40 percent in the seven States that are going to bear 40 percent of the responsibility. Yes, sir.

Mr. GRIFFITH. And I don't think my State, Virginia, is one of those seven States. But our State corporation commission indicated previously that this would increase electric rates in Virginia as well.

So that when folks talk about the rates going down you have to come up with a formula somewhat like Mr. Weissman did which show that while the per unit cost, I believe you said, the cost per unit goes up but we anticipate the people will use less electricity.

Do you see any indications that people are going to use less electricity with all of these electric cars and electric gadgets than—

Mr. McCONNELL. It's kind of unimaginable, isn't it, Congressman? Yes, and so while we look at people in America and consider the fact that we are more energy intensive than we ever have been as a society, we will continue to be so. And then more importantly, think about all the developing countries around the world and how energy intensive they are going to be over the next 15 to 20 years.

And this formula for reduction through the reduction of power that people are going to have, kind of unimaginable while we all pull out our cellphones and text and do all the things that we do now, right.

Mr. GRIFFITH. Yes, sir. I understand that.

Now, also I thought it was interesting you talked about that there wasn't interagency communication and so forth and I know what one of the things that the DOE is talking about now is research parity between the fossil fuels and the renewables and we're not getting there and in fact there has been some push downward.

And wouldn't that help with what we have been talking about with the CCUS, the carbon capture and storage programs? Wouldn't it help if we had parity on clean coal technologies? Because for places like Montana, as we just heard Mr. Kavulla say, it's going to be very difficult for them to meet any of these targets because they are so heavily dependent on coal.

Mr. McCONNELL. Eighty percent of our energy comes from fossil fuel and yet we continue to push research down in the fossil area, for some strange reason, and we are doubling down on the renewable portfolio, which represents about 3 percent of our energy in this country. It is stunning, actually.

And the other thing that's stunning is while this EPA will continue to promote carbon capture, utilization and storage as a commercially demonstrated technology, we are still having conversations about an R and D budget. That is a bit disingenuous, isn't it?

Mr. GRIFFITH. Well, I will let you do the testifying here today. But those who have seen my statements in the past would know I'd probably agree with you.

Let me also talk about “applied for primacy.” I just want to make sure that folks back home know what that means.

Mr. Helms, you said earlier that the State of North Dakota had—in regard to carbon capture, it had applied for primacy in 2013. The paperwork was all finished and sitting on the Administrator of the EPA’s desk in 2014, and yet no action yet. What does that mean, “applied for primacy”?

Mr. HELMS. Well, Mr. Chairman, when you look back at the history of EPA, the first 20 years that this Agency existed it did almost everything through State primacy programs, and those programs were incredibly effective.

Starting in about 1990, Congress and the EPA chose to go with top-down prescriptive regulation through massive one-size-fits-all national programs. That has not served the Nation well.

Primacy is a situation where the EPA sets a basic framework. States apply to regulate under that framework. They get approval of their program through EPA in that framework, and they move ahead with regulation. That is usually an underground injection control, air quality, all of those issues.

Mr. GRIFFITH. And when they talk about this—because my time is running out—when they talk about the successes that the EPA has had in the first decades of its existence it’s been done under that process with the primacy of the States, with the EPA setting up guidelines and the States following through.

And now over the last five or six years or so that EPA has moved away to a more Washington one-size-fits-all approach. Is that what you are saying?

Mr. HELMS. That is absolutely correct, Mr. Chairman, and that is exactly why these rules don’t work, and they can never work because they are not being done State by State through primacy programs.

Mr. GRIFFITH. And I appreciate that.

I will say just as an editorial comment at the end that I appreciate Mr. Weissman’s testimony, and while we won’t agree on everything, there are some things that we would probably agree on that might surprise him and others.

I don’t agree on one thing that he said, though. He talked about the mercury rules and said that the projections were horrible and everything was going to happen, but by 2015 nothing had happened. The rule didn’t fully implement until 2015. We didn’t, fortunately, get a polar vortex this last winter like we had in 2013–14.

I was reading an article this week about the deer population in Virginia and how badly it had been affected by the polar vortex of 2013–14. I would still submit that some of those problems—and I hope we won’t get a polar vortex—but some of those problems brought about by shutting down our coal-fired power plants will show up. Should we be so unfortunate as a nation to get the same kind of conditions that we had in the winter of 2013–14 in the next couple of winters, sure, by 2025 we’ll probably be OK because we will have repaired the damage at great cost to the ratepayers.

With that, my time is up, and I yield back. I do have some business to take care of.

I would like to enter into the record correspondence from the committee dated December 14, 2011, to EPA regarding its benefit

analysis and EPA's written responses dated February 3rd, 2012, and May 4, 2012. This correspondence relates to EPA's use of particulate matter co-benefits in its benefits estimates.

Also, I would ask unanimous consent that the slides that were shown on the television today be submitted for the record. And then there is some closing language we have to say about other stuff in there.

There we go. And also that the record would remain open for 10 days for any Members that wish to ask questions or submit other documents.

Mr. RUSH. No objection, Mr. Chair.

Mr. GRIFFITH. Thank you very much. Anything further?

All right. With that being said, that would end our hearing today. Thank you all so much for your testimony.

[Whereupon, at 1:12 p.m., the committee was adjourned.]

[Material submitted for inclusion in the record follows:]

PREPARED STATEMENT OF HON. FRED UPTON

This subcommittee has held a number of hearings on specific EPA regulations affecting the energy and industrial sectors, but today we are going to take a comprehensive look at the over 3,900 final rules EPA has published in the Federal Register. Many of the regulations on their own threaten jobs and affordable energy in Michigan and areas across the country, but it's the cumulative effect of regulations that matters most.

Regulated energy producers, manufacturers, and other job creators don't get to pick and choose which EPA requirements to comply with—they must meet them all. Likewise, State agencies responsible for maintaining affordable and reliable electricity supplies and overseeing energy production must somehow find a way to implement all of EPA's regulations and mandates, no matter how unworkable, costly, or ill-suited to that State's particular circumstances.

Setting aside legal questions raised by certain rules, the practical challenges associated with implementing the onslaught of new energy-related regulations has never been greater. The Clean Power Plan alone imposes an unprecedented set of new mandates, and in conjunction with Utility MACT, ozone, and other major rules already in place, EPA is dramatically expanding the burden on energy producers and users.

Beyond the costs, EPA is also imposing unprecedented control. The Agency has effectively bypassed the Department of Energy, the Federal Energy Regulatory Commission, and the North American Electric Reliability Corporation, who have longstanding statutory roles in setting energy policy. Perhaps most concerning, the Agency has sidestepped Congress, which never authorized the expansive cap-and-trade scheme that has become the centerpiece of the Obama EPA agenda.

The problem is not just that EPA lacks the statutory authority to dictate energy policy, but that it also lacks the competence to do so. For example, EPA's current and future proposed rules are contributing to an evolving power sector transformation and forcing many coal-fired power plants to shut down which raises serious concerns about electricity costs and reliability that the Agency is not equipped to confront. EPA lacks the technical and policy expertise of, and should not be substituting its own judgments for, the experts at FERC, NERC, and State public utility commissions.

And, unlike FERC and State public utility commissions, the Agency has no obligation to keep electric rates competitive. These increases would be even greater if not for affordable natural gas—something that is now under threat from stringent new EPA regulations targeting emissions from natural gas wells.

EPA's regulations have also been inundating American manufacturers. Not only do they face uncertainty regarding future electric rates and reliability, but many also face direct regulation under complex and unworkable rules. From bricks to cement to automobiles, the Obama administration has targeted many made-in-America products. On top of all that, the latest ozone rule will further add to operating costs at most existing facilities while making it very difficult to open a new factory. And it is important to remember that the cumulative burden EPA imposes here in the U.S. is far more stringent than most of our industrial competitors, so American manufacturers are being placed at a global disadvantage.

The consequences are significant, and President Obama is on his way to becoming the first president in modern times to not have at least one year of 3 percent economic growth. It is important that we understand the impacts of these regulations affecting our critical energy and industrial sectors.

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED TWELFTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2927
Minority (202) 225-3641

December 14, 2011

The Honorable Lisa Jackson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Administrator Jackson:

Pursuant to Rules X and XI of the Rules of the U.S. House of Representatives, the Committee on Energy and Commerce seeks information regarding analyses published by the Environmental Protection Agency (EPA) containing estimates of the public health benefits expected to result from regulatory actions. In March 2011, EPA published estimates which attributed \$2 trillion of benefits to regulations issued through 2005¹, nearly 9 percent of the GDP forecasted for the year 2020². Most of those benefits are attributable to reductions in premature mortality associated with reductions of a single pollutant in the ambient air, fine particulate matter. Additional estimates of benefits published by EPA include up to \$280 billion associated with the Cross State Air Pollution Rule (published August 8, 2011), and \$140 billion estimated for the proposed Utility MACT rule (published May 3, 2011). Nearly all of the monetized benefits estimated represent "PM-Related Mortalities Avoided" at concentrations much lower than the level of the protective national standard.

On October 5, 2011, you testified before the Committee's Subcommittee on Oversight and Investigations that the National Ambient Air Quality Standards (NAAQS) are set at a level to protect the public health with a margin of safety. However, in the above referenced and other analyses, EPA's estimates of extensive public health benefits that will accrue from avoiding exposure to airborne fine particulate matter are calculated for air concentrations much lower than

¹ EPA, March, 2011, "The Benefits and Costs of the Clean Air Act Amendments 1990 to 2020", available at <http://www.epa.gov/air/sect812/feb11/fullreport.pdf>.

² Forecasts of 2020 nominal GDP from CBO, "The Budget and Economic Outlook: Fiscal Years 2010 to 2020", available at <http://www.cbo.gov/ftpdocs/108xx/doc10871/01-26-Outlook.pdf>.

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the current fine particulate matter NAAQS. The apparent conflict between EPA's definition of clean air and the mortality reductions estimated by EPA at significantly lower (cleaner) concentrations raises questions about the interpretation of information provided to Congress and to the public.

It is well documented that, under existing standards and regulations, air quality in the United States has improved considerably and will continue to do so. EPA's data shows significant improvements in a variety of environmental measures, including all six common air pollutants. A critical component of protecting public health and the environment is accurate analysis based upon robust science, including estimates of the benefits and costs of alternative policy strategies. EPA's mandate requires that such analyses rely upon the best available science, interpreted in an unbiased manner.

To assist the Committee in evaluating the estimates contained in agency reports, EPA testimony, and other public information, we request that you provide written responses to the following questions and the requested documents by January 6, 2012:

1. In the regulatory impact analysis for the Portland Cement rule published September 9, 2010, EPA reported that it has changed its assumption concerning the concentration threshold for PM 2.5-related mortality: "EPA now estimates PM-related mortality without assuming an arbitrary threshold in the concentration-response function." (August 2010, "Regulatory Impact Analysis: Amendments to the National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards (NSPS) for the Portland Cement Manufacturing Industry, Final Report", Section 6.2.1.)
 - a. Did EPA change its assumption concerning the concentration threshold at which PM is likely to cause premature mortality?
 - b. If EPA changed the assumption, explain who gave ultimate direction to change the assumption, when was it changed, and what was the basis for making the change.
 - c. If EPA changed the assumption, provide all analyses and briefing or decision memoranda, for the EPA Administrator or EPA Assistant Administrator for Air and Radiation, relating to the change in assumptions.
2. For each final economically significant rule issued by EPA after January 1, 2007, what proportion of monetized PM 2.5 benefits represent reductions in mortality at air concentrations below 15 micrograms per cubic meter averaged annually, the level of the current PM 2.5 NAAQS?
3. For each final economically significant rule issued by EPA after January 1, 2007, what proportion of monetized PM 2.5 benefits represents reductions in mortality at air concentrations below Lowest Measured Level as defined by EPA in regulatory analyses using Laden, et al. 2006. "Reduction in Fine Particulate Air Pollution and Mortality" (*American Journal of Respiratory and Critical Care Medicine*)?


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4. For each final economically significant rule issued after January 1, 2007, what proportion of monetized PM_{2.5} benefits represents reductions in mortality at air concentrations below Lowest Measured Level as defined by EPA in regulatory analyses using Pope, et al. 2002. "Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution" (*JAMA*)?
5. Do you consider the level of air quality that is established through the NAAQS process, including peer review by science advisors, to result in an "arbitrary" threshold, or do you believe that the NAAQS standard represents a level of air quality that is protective of public health, including sensitive populations, with an adequate margin of safety, as required by the Clean Air Act?
 - a. If the NAAQS standards protect the public health with an adequate margin of safety, explain how can the EPA estimate that short-term exposure to air in attainment areas would result in hundreds of thousands of deaths each year?
6. Please provide any scientific studies EPA has relied upon to show a causal or associative relationship between fine particulate matter and premature mortality at levels below what EPA calls the "Lowest Measured Level" in the Pope and the Laden studies.
7. According to the most recent Particulate Matter Risk Assessment, EPA estimates that "total PM_{2.5}-related premature mortality ranges from 63,000 and 88,000" each year above the lowest measured level. EPA's estimate of benefits from the CSAPR rule, which involves almost all PM-related benefits, notes that mortality ranges between 130,000 and 320,000 deaths per year.
 - a. Please explain how EPA came to these two different estimated mortality ranges.
 - b. Please explain the basis for EPA's monetization of a dramatically higher number than is identified in the peer-reviewed Risk Assessment.
 - c. Did you or the Assistant Administrator for Air and Radiation approve the public report of a dramatically higher number?
 - d. If so, please provide all documents relating to such approval.
 - e. If not, please explain why not.

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We request that you adhere to the instructions relating to the requests for documents attached to this letter. Thank you for your prompt attention to this request. Should you have any questions, please contact Peter Spencer of the Majority Committee staff at (202) 225-2927.

Sincerely,



Fred Upton
Chairman



Cliff Stearns
Chairman
Subcommittee on Oversight and Investigations



Ed Whitfield
Chairman
Subcommittee on Energy and Power

Attachment

cc: The Honorable Cass Sunstein
Administrator of the Office of Information and Regulatory Affairs
Office of Management and Budget

The Honorable Henry A. Waxman, Ranking Member

The Honorable Bobby L. Rush, Ranking Member
Subcommittee on Energy and Power

The Honorable Diana DeGette, Ranking Member
Subcommittee on Oversight and Investigations



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB - 3 2012

OFFICE OF
AIR AND RADIATION

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your letter of December 14, 2011, to Administrator Lisa Jackson, co-signed by three of your colleagues, requesting additional information regarding the Environmental Protection Agency's estimates of the public health benefits expected to result from regulatory actions. The Administrator has asked me to respond on her behalf.

Your letter raises several questions about our benefits estimates for reducing fine particle pollution. We believe the health improvements achieved by reducing fine particle exposures represent real benefits to real people, and it is appropriate to provide information to decisionmakers and the public about these expected benefits of cleaner air. These estimates are incorporated in Regulatory Impact Analyses (RIAs), which help inform decisionmakers and the public about the potential benefits and costs of our proposed and final rules. The benefits estimates and RIAs are developed and reviewed as part of the normal rulemaking process, including interagency review and public notice and comment. We prepare these estimates for all economically significant rules. Although we strive to make these analyses as complete as possible, there are often many benefits that cannot be quantified, including a number of significant benefits from reducing mercury and other air toxics.

EPA's approach for estimating benefits from reducing fine particle pollution is science-driven. Studies demonstrate an association between premature mortality and fine particle pollution at the lowest levels measured in the relevant studies, levels that are significantly below the NAAQS for fine particles. These studies have not observed a level at which premature mortality effects do not occur. The best scientific evidence, confirmed by independent, Congressionally-mandated expert panels, is that there is no threshold level of fine particle pollution below which health risk reductions are not achieved by reduced exposure. Thus, based on specific advice from scientific peer-review, we project benefits from reducing fine particle pollution below the level of the NAAQS and below the lowest levels measured in the studies.

Using a no-threshold approach to developing our primary benefits estimates for our rules, which was also the approach we took from 1997 to 2006, is warranted by the extensive scientific review reflected in the *Integrated Science Assessment on Particulate Matter* (PM ISA), the first draft of which was prepared by EPA scientists and technical staff and released in December 2008. All drafts of the PM ISA reflect this conclusion that there is no scientific evidence supporting assumption of a threshold for PM effects.

risks. The no-threshold approach, and associated projections of benefits, were also specifically reviewed and approved by the Advisory Council on Clean Air Compliance Analysis, another panel of outside experts established by Congress to review EPA studies of the benefits and costs of the Clean Air Act.

Based on the first draft PM ISA released in December 2008, EPA technical staff incorporated the no-threshold approach in benefits calculations, which were subject to intra- and inter-agency review and public notice and comment. We have followed a no-threshold approach to our primary benefits estimate since then.

Detailed responses to a number of specific questions raised in your letter are addressed in the attachment. We have also provided the key documents cited in this letter on the enclosed disc. Again, the Administrator and I thank you for your letter. If you have further questions, please contact me or your staff may call Josh Lewis in the EPA's Office of Congressional and Intergovernmental Relations at (202) 564-2095.

Sincerely,

A large black rectangular redaction box covering the signature of Gina McCarthy.

Gina McCarthy
Assistant Administrator

Attachment

1. In the regulatory impact analysis for the Portland Cement rule published September 9, 2010, EPA reported that it has changed its assumption concerning the concentration threshold for PM_{2.5}-related mortality: "EPA now estimates PM-related mortality without assuming an arbitrary threshold in the concentration-response function." (August 2010, "Regulatory Impact Analysis: Amendments to the National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards (NSPS) for the Portland Cement Manufacturing Industry, Final Report", Section 6.2.1.)

a. Did EPA change its assumption concerning the concentration threshold at which PM is likely to cause premature mortality?

b. If EPA changed the assumption, explain who gave ultimate direction to change the assumption, when was it changed, and what was the basis for making the change.

c. If EPA changed the assumption, provide all analyses and briefing or decision memoranda, for the EPA Administrator or EPA Assistant Administrator for Air and Radiation, relating to the change in assumptions.

Response: EPA's approach to estimating health benefits is driven by the scientific evidence regarding the health effects associated with PM_{2.5} exposure at various concentration levels. Our approach is well-established, including accounting for benefits that occur below 15 micrograms per cubic meter (µg/m³) (the level of the current annual PM_{2.5} National Ambient Air Quality Standards (NAAQS), which were issued in 2006). The Agency is committed to ensuring that its benefits analyses reflect the latest scientific evidence regarding pollution, health and the environment. As a result, the agency must periodically update its benefits assessment methodology.

From 1997 to 2006, EPA's approach for estimating benefits associated with reducing exposure to fine particles reflected the scientific literature, which indicated that health effects can occur along the entire range of potential exposures. EPA's best estimate of PM_{2.5}-related benefits reflected this science and assumed no level below which health effects do not occur (i.e., it assumed no threshold). For benefits analyses conducted during this time, EPA recognized the importance of this assumption and conducted various sensitivity analyses showing the impact this assumption would have on the total monetized benefits. EPA's use of the no-threshold model as the best estimate and our use of sensitivity analysis to evaluate the significance of this approach were both reviewed and supported by the outside experts, including the National Academies of Science¹ and the EPA's independent Science Advisory Board^{2,3}.

¹ National Research Council (NRC). 2002. *Estimating the Public Health Benefits of Proposed Air Pollution Regulations*. Washington, DC: The National Academies Press.

² U.S. Environmental Protection Agency - Science Advisory Board. 1999. The Clean Air Act Amendments (CAAA) Section 812 Prospective Study of Costs and Benefits (1999): Advisory by the Health and Ecological Effects Subcommittee on Initial Assessments of Health and Ecological Effects; Part 1. EPA-SAB-COUNCIL-ADV-99-012. July. Available on the Internet at [http://yosemite.epa.gov/sab/sabproduct.nsf/F64A21824D19766885257193005E51CA/\\$File/conadv12.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/F64A21824D19766885257193005E51CA/$File/conadv12.pdf)

³ U.S. Environmental Protection Agency - Science Advisory Board (U.S. EPA-SAB). 2004. Advisory on Plans for Health Effects Analysis in the Analytical Plan for EPA's Second Prospective Analysis – Benefits and Costs of the Clean Air Act, 1990-2020. Advisory by the Health Effects Subcommittee of the Advisory Council on Clean Air Compliance Analysis. EPA-SAB-COUNCIL-ADV-04-002. March. Available on the Internet at [http://yosemite.epa.gov/sab%5CSABPRODUCT.NSF/08E1155AD24F871C85256E5400433D5D/\\$File/council_adv_04002.pdf](http://yosemite.epa.gov/sab%5CSABPRODUCT.NSF/08E1155AD24F871C85256E5400433D5D/$File/council_adv_04002.pdf).

Based on an ambiguous statement in a 2005 letter from EPA's independent Clean Air Scientific Advisory Committee (CASAC)⁴, EPA changed its long-standing approach and applied an assumed threshold for the benefits analysis of the 2006 PM NAAQS. As a result, all regulatory analyses of regulations reducing exposure to PM_{2.5} conducted between 2006 and 2009 reflected an assumption that there were no benefits associated with reducing PM_{2.5} below 10 µg/m³.

When EPA scientists and technical experts started work on the initial draft of the *Integrated Science Assessment on Particulate Matter* (PM ISA) in 2008, these scientists and experts reached a conclusion that—based on an extensive review of the body of scientific literature—there was no scientific basis for assuming a threshold in the relationship between PM concentration levels and changes in risk of premature mortality (or other adverse PM-related health effects). This conclusion was reviewed by CASAC and incorporated in the second draft of the PM ISA submitted for CASAC review in 2009. EPA scientists and technical experts updated the approach for assessing PM_{2.5}-related benefits to be consistent with the scientific literature. The conclusion in all drafts of the PM ISA is that the scientific literature provides no evidence of a threshold below which health effects associated with exposure to fine particles—including premature death—would not occur (U.S. EPA, 2009)^{5,6}. Based on that review, the Agency discontinued use of an assumed threshold in the calculation of PM_{2.5}-related benefits and returned to the prior, peer-reviewed practice of using a no-threshold approach. The absence of an assumed threshold means that estimates of the health benefits of reductions in PM_{2.5} concentrations will again be more complete and consistent with the best science by counting reductions in risk in all locations where air quality is improved, including in areas which start with less-polluted air.

EPA's no-threshold approach has been recently confirmed by two separate, independent peer review panels: the Clean Air Scientific Advisory Committee (CASAC)⁷ and the Advisory Council on Clean Air Compliance Analysis (Council).⁸

⁴ The CASAC, in their 2005 consensus advisory letter on the PM staff paper, conveyed an ambiguous recommendation pertaining to assumption of a threshold. U.S. Environmental Protection Agency – Science Advisory Board. 2005. *Review of the National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information (Second Draft PM Staff Paper, January 2005)*; and *Particulate Matter Health Risk Assessment for Selected Urban Areas: Second Draft Report (Second Draft PM Risk Assessment, January 2005)*. U.S. Environmental Protection Agency, Washington, DC, EPA-SAB-CASAC-05-007. Available on the Internet at [http://yosemite.epa.gov/sab/sabproduct.nsf/e523dd36175eb5ad8525701b007332ae/\\$file/sab-casac-05-007_unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/e523dd36175eb5ad8525701b007332ae/$file/sab-casac-05-007_unsigned.pdf)

⁵ EPA released the first draft PM ISA in December 2008, and the document was peer reviewed by the EPA's independent Science Advisory Board in April 2009. EPA released the second draft ISA in July 2009, which was peer reviewed in October 2009. The final ISA was issued in December 2009.

⁶ U.S. Environmental Protection Agency. 2009. *Integrated Science Assessment for Particulate Matter (Final Report)*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F. Available on the Internet at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=216546>.

⁷ U.S. Environmental Protection Agency - Science Advisory Board. 2009a. *Review of EPA's Integrated Science Assessment for Particulate Matter (First External Review Draft, December 2008)*. EPA-CASAC-09-008. May. Available at [http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/73ACCA834AB44A10852575BD0064346B/\\$file/EPA-CASAC-09-008-unsigned.pdf](http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/73ACCA834AB44A10852575BD0064346B/$file/EPA-CASAC-09-008-unsigned.pdf).

U.S. Environmental Protection Agency - Science Advisory Board. 2009b. *Consultation on EPA's Particulate Matter National Ambient Air Quality Standards: Scope and Methods Plan for Health Risk and Exposure Assessment*. EPA-CASAC-09-009. May. Available on the Internet at [http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/723FE644C5D758DF852575BD00763A32/\\$file/EPA-CASAC-09-009-unsigned.pdf](http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/723FE644C5D758DF852575BD00763A32/$file/EPA-CASAC-09-009-unsigned.pdf).

In December 2009, the Health Effect Subcommittee of the Advisory Council on Clean Air Compliance Analysis (Council/HES) met to review several aspects of the draft health effects analysis supporting EPA's developing study titled, "The Benefits and Costs of the Clean Air Act from 1990 to 2020." In response to a review charge question specifically requesting advice on EPA's use of a no-threshold model for benefits analysis, the Council/HES endorsed the use of a no-threshold model. The Council's written advisory report subsequently concluded that "[t]he HES fully supports EPA's use of a no-threshold model to estimate the mortality reductions associated with reduced PM exposure."⁹

EPA began implementing this change in analytical methods with the proposed Portland cement rule, soliciting public comment on the appropriateness of both the no-threshold and threshold approaches for PM_{2.5} benefits analysis in the preamble to the proposed rule:¹⁰

"EPA strives to use the best available science to support our benefits analyses. We recognize that interpretation of the science regarding air pollution and health is dynamic and evolving. One of the key differences between the method used in this analysis of PM co-benefits and the methods used in recent [Regulatory Impact Analyses] RIAs is that, in addition to technical updates, we removed the assumption regarding thresholds in the health impact function. Based on our review of the body of scientific literature, we prefer the no-threshold model. EPA's draft Integrated Science Assessment (2008), which is currently being reviewed by EPA's Clean Air Scientific Advisory Committee, concluded that the scientific literature consistently finds that a no-threshold log-linear model most adequately portrays the PM-mortality concentration-response relationship while recognizing potential uncertainty about the exact shape of the concentration-response function. It is important to note that while CASAC provides advice regarding the science associated with setting the National Ambient Air Quality Standards, typically other scientific advisory bodies provide specific advice regarding benefits analysis..."

"The question of whether or not to assume a threshold in calculating the co-benefits associated with reductions in PM_{2.5} is an issue that affects the benefits calculations not only for this rule but for many future EPA rulemakings and analyses. Due to these implications, we solicit comment on appropriateness of both the no-threshold and threshold model for PM benefits analysis."

Taking into account subsequent public comments in response to the preamble, as well as advice from outside expert advisory panels, EPA technical staff then prepared the final benefits analysis for the Portland cement rule, relying on analytical results that reflected the no-threshold approach as the best estimate of benefits. The final Regulatory Impact Analysis documented the application, and the basis for, the no-threshold modeling approach.¹¹

⁸ U.S. Environmental Protection Agency – Science Advisory Board (U.S. EPA-SAB). 2010. *Review of EPA's DRAFT Health Benefits of the Second Section 812 Prospective Study of the Clean Air Act*. EPA-COUNCIL-10-001. June. Available on the Internet at [http://yosemite.epa.gov/sab/sabproduct.nsf/0/72D4EFA39E48CDB28525774500738776/\\$File/EPA-COUNCIL-10-001-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/0/72D4EFA39E48CDB28525774500738776/$File/EPA-COUNCIL-10-001-unsigned.pdf).

⁹ Ibid, SAB 2010. EPA-COUNCIL-10-001.

¹⁰ 74 FR 21136- 21192

¹¹ U.S. Environmental Protection Agency. 2010. *Regulatory Impact Analysis: Amendments to the National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards (NSPS) for the Portland Cement Manufacturing Industry*, Office of Air and Radiation, August 2010. Available on the Internet at <http://www.epa.gov/ttn/ecas/regdata/RIAs/portlandcementfinalria.pdf>

We have provided the key documents cited in the response to this question and throughout this letter on the enclosed disc.

2. For each final economically significant rule issued by EPA after January 1, 2007, what proportion of monetized PM_{2.5} benefits represent reductions in mortality at air concentrations below 15 micrograms per cubic meter averaged annually, the level of the current PM_{2.5} NAAQS?

For final economically significant rules issued after January 1, 2007, the date cited in your question, EPA has not specifically calculated the proportion of monetized PM_{2.5} benefits below 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

We do not believe that it is scientifically defensible to look solely at benefits above 15 $\mu\text{g}/\text{m}^3$ because there are peer-reviewed, scientific studies showing health effects below this level. While 15 $\mu\text{g}/\text{m}^3$ is the level of the current (2006) annual PM_{2.5} NAAQS, it is not directly related to the studies we use to calculate benefits, which observed health effects associated with exposure to PM_{2.5} concentrations below this level. This is consistent with the fact that NAAQS are not “zero risk” standards. Instead, EPA’s current approach is to show the complete distribution of benefits across the entire range of PM_{2.5} concentrations. We believe showing the entire distribution provides much more information than cutpoint analyses.

Below are the figures from four final RIAs that show the distribution of premature deaths across the range of PM_{2.5} concentrations: the Portland Cement MACT and NSPS (8/6/10); the Cross-State Air Pollution Rule (CSAPR) (7/6/11); the 2014-2018 Heavy Duty Vehicle GHG Rule (8/9/11) and the Mercury and Air Toxics Standards (MATS) (12/16/11). These figures illustrate the proportion of benefits associated with exposure to PM_{2.5} concentrations at various concentrations, including above 15 $\mu\text{g}/\text{m}^3$, even though we have not explicitly reported that proportion in the RIAs. It is important to note that these figures show the percentage of premature deaths, not the monetized benefits.

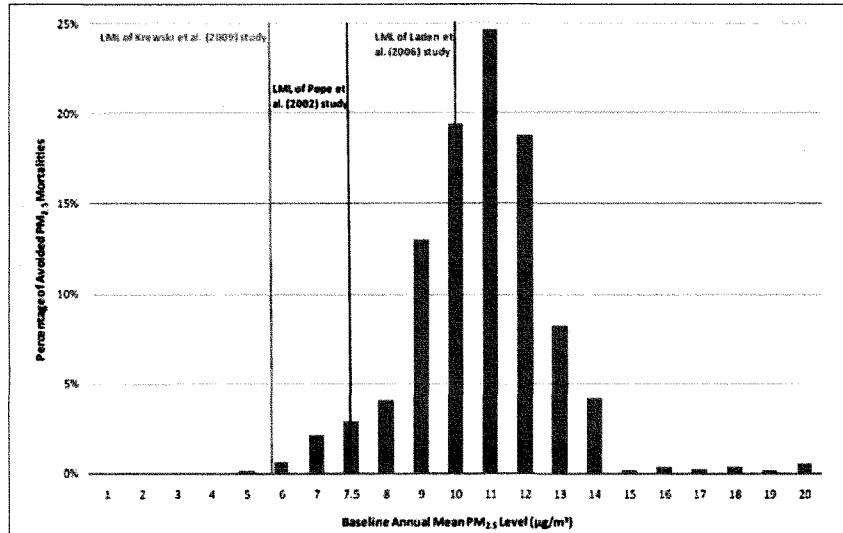


Figure 6-6. Percentage of Total PM-Related Mortalities Avoided by Baseline Air Quality Level for Final Portland Cement NESHAP and NSPS^a

^a Approximately 94% of the mortality impacts occur among populations with baseline exposure to annual mean PM_{2.5} levels at or above 7.5 µg/m³, which is the lowest air quality level considered in the ACS cohort study by Pope et al. (2002).

Figure 5-19: Distribution of PM_{2.5}-related mortality impacts by baseline PM_{2.5} levels, PM_{2.5} epidemiology study and lowest measured level (LML) of each study For the Final Cross-State Air Pollution Rule

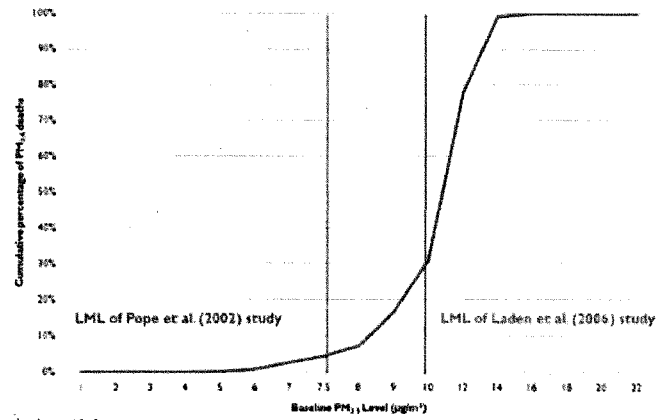
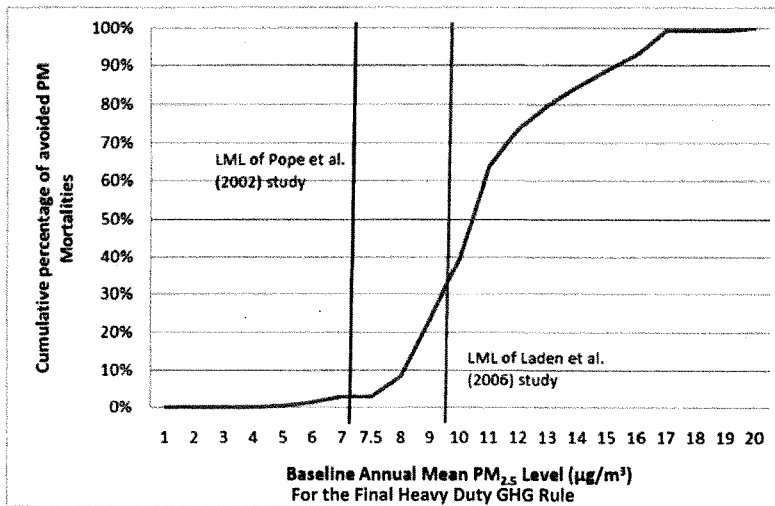
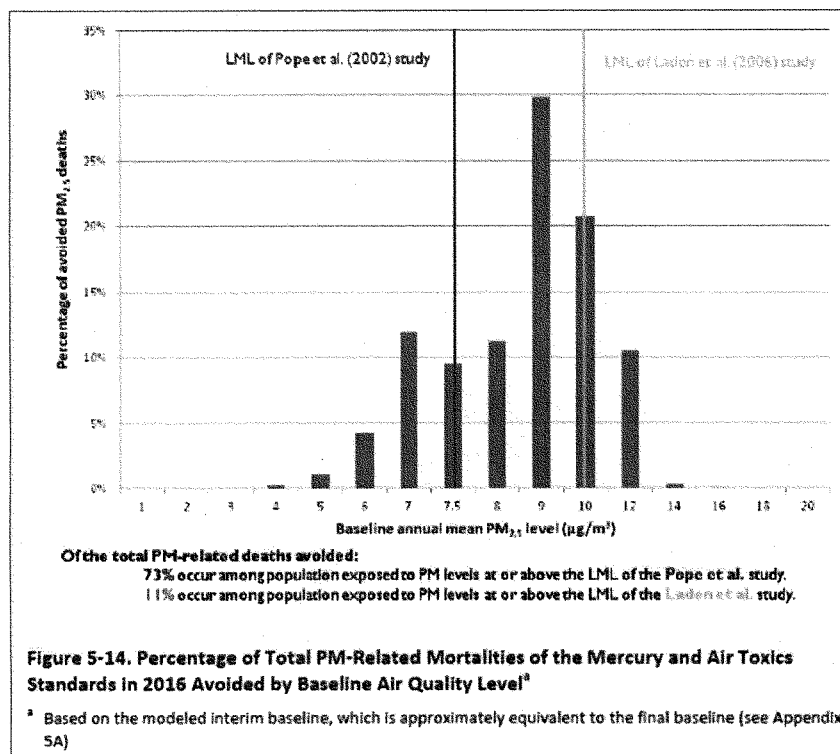


Figure 8-20: Cumulative Percentage of Total PM-related Mortalities Avoided by Baseline Air Quality Level





3. For each final economically significant rule issued by EPA after January 1, 2007, what proportion of monetized PM_{2.5} benefits represents reductions in mortality at air concentrations below Lowest Measured Level as defined by EPA in regulatory analyses using Laden, et al. 2006. "Reduction in Fine Particulate Air Pollution and Mortality" (American Journal of Respiratory and Critical Care Medicine)?
4. For each final economically significant rule issued after January 1, 2007, what proportion of monetized PM_{2.5} benefits represents reductions in mortality at air concentrations below Lowest Measured Level as defined by EPA in regulatory analyses using Pope, et al. 2002. "Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution" (JAMA)?

Response to Questions 3-4:

Prior to 2006, EPA did not assume a threshold when calculating the best estimate of PM_{2.5}-related benefits. Between 2006 and 2009, EPA assumed a threshold when calculating the best estimate of PM_{2.5}-related benefits. The Agency discontinued the assumption of a threshold in April 2009, recognizing that a no-threshold approach best represents the PM_{2.5} mortality concentration-response relationship, thereby providing the most accurate estimate of PM_{2.5}-related benefits.

EPA's no-threshold approach has been confirmed by two separate, independent peer review panels: the Clean Air Scientific Advisory Committee (CASAC)¹² and the Advisory Council on Clean Air Compliance Analysis (Council).¹³

After April 2009, EPA transitioned to an approach for characterizing uncertainty in its benefits estimate that was consistent with the scientific literature on PM_{2.5} and health. This approach included returning to our prior use of a no-threshold approach to calculating the primary estimate of benefits, but the new approach also examines benefits above different cutpoints, including the lowest measured levels (LML)¹⁴ from the underlying epidemiology studies. Information regarding these LML analyses, which examined the percent of avoided PM_{2.5} exposures or PM_{2.5}-related deaths estimated to occur at concentrations above those cutpoints, is provided below and also is available in the Regulatory Impact Analyses for these rules.

¹² U.S. Environmental Protection Agency - Science Advisory Board. 2009a. *Review of EPA's Integrated Science Assessment for Particulate Matter (First External Review Draft, December 2008)*. EPA-CASAC-09-008. May. Available at [http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/73ACCA834AB44A10852575BD0064346B/\\$File/EPA-CASAC-09-008-unsigned.pdf](http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/73ACCA834AB44A10852575BD0064346B/$File/EPA-CASAC-09-008-unsigned.pdf).

U.S. Environmental Protection Agency - Science Advisory Board. 2009b. *Consultation on EPA's Particulate Matter National Ambient Air Quality Standards: Scope and Methods Plan for Health Risk and Exposure Assessment*. EPA-CASAC-09-009. May. Available on the Internet at [http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/723FE644C5D758DF852575BD00763A32/\\$File/EPA-CASAC-09-009-unsigned.pdf](http://yosemite.epa.gov/sab/SABPRODUCT.NSF/81e39f4c09954fcb85256ead006be86e/723FE644C5D758DF852575BD00763A32/$File/EPA-CASAC-09-009-unsigned.pdf).

¹³ U.S. Environmental Protection Agency - Science Advisory Board (U.S. EPA-SAB). 2010. *Review of EPA's DRAFT Health Benefits of the Second Section 812 Prospective Study of the Clean Air Act*. EPA-COUNCIL-10-001. June. Available on the Internet at [http://yosemite.epa.gov/sab/sabproduct.nsf/0/72D4EFA39E48CDB28525774500738776/\\$File/EPA-COUNCIL-10-001-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/0/72D4EFA39E48CDB28525774500738776/$File/EPA-COUNCIL-10-001-unsigned.pdf).

¹⁴ An LML, or lowest measured level, refers to the lowest average ambient PM_{2.5} concentration measured in key epidemiological studies evaluating the association between fine particle exposures and health effects. This is not the same as a lowest observable effects level or a no observed effects level. The science indicates, and our science advisors agree, that health effects are likely below these levels.

Analyses of rules issued between 2006 and 2009

As discussed in our response to question 2, EPA assumed a threshold of $10 \mu\text{g}/\text{m}^3$ when calculating $\text{PM}_{2.5}$ -related benefits for rules issued between 2006 and 2009. This means that all of the estimated benefits for these rules were related to exposures above $10 \mu\text{g}/\text{m}^3$. These rules included the RICE Spark Ignition NSPS (12/20/07), the Ozone NAAQS (3/16/08), the Petroleum Refineries NSPS (4/30/08), the Locomotive and Marine Rule (3/14/08), the Small Spark Ignition & Recreational Marine Engines Rule (9/4/08), and the Lead NAAQS (10/16/08).

In 2009, EPA finalized the *Integrated Science Assessment for Particulate Matter* (US EPA, 2009), which concluded that there was no scientific foundation for assuming a threshold for $\text{PM}_{2.5}$ health effects. Indeed, the current body of scientific literature on particulate matter and health indicates that there is no evidence of a threshold below which health effects – including premature deaths – would not occur. As discussed above, to ensure that our work continues to reflect the best available science, the Agency discontinued the assumption of a threshold in the calculation of $\text{PM}_{2.5}$ -related benefits, returning to the no-threshold approach used in pre-2006 rulemaking analyses. The no-threshold approach has subsequently been used in all recent rulemaking analyses.

In December 2009, the Health Effect Subcommittee of the Advisory Council on Clean Air Compliance Analysis (Council/HES) reviewed several aspects of the draft health effects analysis supporting EPA's developing study, titled "The Benefits and Costs of the Clean Air Act from 1990 to 2020." In response to a review charge question specifically requesting advice on EPA's use of a no-threshold model, the Council/HES endorsed the use of a no-threshold model. The Council's written advisory report concluded that "[t]he HES fully supports EPA's use of a no-threshold model to estimate the mortality reductions associated with reduced PM exposure."¹⁵

Analyses of Rules Issued Between April 2009 and June 2010: Sensitivity Analyses During Transition Period

As EPA transitioned to analyses using the no-threshold model, the Agency conducted sensitivity analyses¹⁶ for several rules to show how changing this assumption affected the benefits estimates, especially for those rules that changed assumptions between proposal and final. Estimates from these sensitivity analyses illustrated the impact of assuming different thresholds for $\text{PM}_{2.5}$ -related benefits. For the C3 Marine Rule (12/1/09), EPA's sensitivity analysis indicated that 63 percent of the total avoided $\text{PM}_{2.5}$ -related premature deaths estimated in the full regulatory impact analysis (RIA) were associated with exposures above $10 \mu\text{g}/\text{m}^3$, and 83 percent were associated with exposures above $7.5 \mu\text{g}/\text{m}^3$. Similarly, for the 2012-2016 Light Duty Vehicle GHG Rule (4/1/10),¹⁷ EPA's sensitivity analysis indicated that 78 percent of the avoided $\text{PM}_{2.5}$ -related premature deaths estimated in the full RIA were associated with exposures above $10 \mu\text{g}/\text{m}^3$ and 93 percent with exposures above $7.5 \mu\text{g}/\text{m}^3$.

For the RICE Compression Ignition (CI) NESHAP (2/22/10) and the SO_2 NAAQS (6/2/10), EPA conducted sensitivity analyses that provided information regarding the percent of the $\text{PM}_{2.5}$ -related benefits monetized in the full RIA that were associated with exposures below $10 \mu\text{g}/\text{m}^3$. Assuming a threshold at $10 \mu\text{g}/\text{m}^3$ in the sensitivity analysis for the RICE CI NESHAP, EPA estimated that 70

¹⁵ Ibid, SAB 2010. EPA-COUNCIL-10-001.

¹⁶ Sensitivity analyses are generally conducted to gain insights into sources of uncertainty and variability.

¹⁷ This rule established a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce greenhouse gas emissions and improve fuel economy. The majority of projected monetized benefits are associated with greenhouse gas reductions and consumer fuel savings related to reduced oil consumption.

percent of the PM_{2.5}-related monetized benefits estimated in the full RIA were associated with exposures above 10 µg/m³. In the sensitivity analysis for the SO₂ NAAQS, using that same assumption showed that 66 percent of the monetized benefits estimated in the full RIA analysis were associated with exposures above 10 µg/m³.

Lowest Measured Level (LML) Analyses in Rules Issued After July 2010:

July 2010 marked the first time since EPA returned to using a no-threshold approach that the Agency had the data, technical tools and ambient PM_{2.5} concentration information needed to conduct an LML assessment as part of the regulatory impact analyses for certain rules. An LML analysis provides us with additional insights regarding our estimates of health impacts at varying PM_{2.5} concentrations: we have the highest confidence in the magnitude of our estimates of adverse health impacts at concentrations at or above the LML of the underlying epidemiology studies, and somewhat less confidence in the magnitude of our estimates of adverse health impacts at concentrations below the LML.

The final rules completed since EPA began conducting LML analyses in 2010 relied on LMLs from two studies: an LML of 10 µg/m³ from the Harvard Six Cities study (Laden et al. 2006)¹⁸ and an LML of 7.5 µg/m³ from the earlier study of the American Cancer Society (Pope et al. 2002).¹⁹ Studies from more recent years, during which PM_{2.5} concentrations have fallen, continue to report strong associations with mortality. For example, based on the most recent extended analysis of the ACS study (Krewski et al., 2009),²⁰ we have confidence in our estimates of avoided PM_{2.5}-related deaths down to at least 5.8 µg/m³, the LML in this study, and somewhat less confidence in estimates below 5.8 µg/m³.

EPA has conducted LML assessments for seven economically significant final rules since July 2010. These assessments vary in terms of how they evaluated PM_{2.5}-related health impacts occurring below the LML. When we have sufficient air quality modeling data for a rule, LML analyses estimate the percentage of PM_{2.5}-related premature deaths avoided at or above the LML. The number of premature deaths reduced at different concentrations is a good approximation of the monetized, PM_{2.5}-related benefits achieved by reductions in exposure at those concentrations.

Thus far, EPA has had sufficient data to assess the proportion of PM_{2.5}-related premature deaths avoided in an LML analysis for four final rules. These include: the Portland Cement MACT and NSPS (8/6/10); the Cross-State Air Pollution Rule (CSAPR) (7/6/11); the 2014-2018 Heavy Duty Vehicle GHG Rule (8/9/11) and the Mercury and Air Toxics Standards (MATS) (12/16/11).

For the Portland Cement rule, for example, a very large proportion of avoided PM_{2.5}-related impacts in the LML analysis occur among populations exposed at or above the lowest LML of the cohort studies.²¹

¹⁸ Laden, F., J. Schwartz, F.E. Speizer, and D.W. Dockery. 2006. "Reduction in Fine Particulate Air Pollution and Mortality." *American Journal of Respiratory and Critical Care Medicine* 173:667-672.

¹⁹ Pope, C.A., III, R.T. Burnett, M.J. Thun, E.E. Calle, D. Krewski, K. Ito, and G.D. Thurston. 2002. "Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution." *Journal of the American Medical Association* 287:1132-1141.

²⁰ Krewski, D., M. Jerrett, et al. 2009. "Extended follow-up and spatial analysis of the American Cancer Society study linking particulate air pollution and mortality." *Res Rep Health Eff Inst* 140: 5-114.

²¹ U.S. Environmental Protection Agency. 2010. *Regulatory Impact Analysis: Amendments to the National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards (NSPS) for the Portland Cement Manufacturing Industry*, Office of Air and Radiation, August 2010. Available on the Internet at <http://www.epa.gov/ttn/ecas/regdata/RIAs/portlandcementfinalria.pdf>

That analysis showed that approximately 94 percent of the premature deaths occur among populations with baseline exposure to annual mean PM_{2.5} levels at or above the LML of 7.5 µg/m³, with approximately 40 percent occurring at or above the LML of 10 µg/m³. Similarly, the LML analysis for the CSAPR showed 96 percent of premature deaths estimated among populations exposed to PM_{2.5} occurred at concentrations at or above an LML of 7.5 µg/m³, and 69 percent of the deaths estimated among populations exposed to PM_{2.5} occurred at concentrations at or above the LML of 10 µg/m³.²²

For the 2014-2018 Heavy Duty Vehicle GHG Rule (8/9/11)²³, the LML analysis confirmed that the great majority of the impacts occur at or above each study's LML. The LML analysis shows that approximately 97 percent of PM_{2.5}-related deaths occur at or above an annual mean PM_{2.5} concentration of 7.5 µg/m³, while about 60 percent of the avoided impacts occur at or above an annual mean PM_{2.5} concentration of 10 µg/m³.²⁴ The LML analysis for the MATS rule showed approximately 73 percent of premature deaths estimated for population exposures at or above an LML of 7.5 µg/m³, and approximately 11 percent estimated for population exposures above an LML of 10 µg/m³.²⁵

For other rules without air quality modeling data, the LML analyses estimate the percentage of people exposed to PM_{2.5} concentrations below the LML before the rule is implemented. As noted in our analyses, we did not have data to estimate the number of premature deaths occurring at different concentrations for these rules.

While illustrative of baseline air quality conditions, the proportion of people *exposed at a certain concentration before a rule is implemented* is not always a good approximation of the proportion of the *benefits* at that concentration. The reason for this difference is the location of PM_{2.5} improvements that would result from a given rule. If the largest air quality improvements from a particular rule occur in locations where PM_{2.5} concentrations are high before that rule is implemented, then a lot of the benefits would occur in those same areas. As a result, the percentage of benefits at or above the LML would be larger than the percentage of the population exposed to PM_{2.5} at or above the LML before the rule.

Four final rules used the approach described in the preceding paragraph: the RICE Stationary Spark Ignition NESHAP (8/10/10), the Commercial and Industrial Solid Waste Incineration NSPS and Emission Guidelines (2/23/11), the Sewage Sludge Incineration NSPS and Emission Guidelines (2/23/11), the Industrial, Commercial and Institutional Boilers NESHAP (2/23/11), and the Boiler Area Source Rule (2/23/11).

²² U.S. Environmental Protection Agency. 2010. Regulatory Impact Analysis (RIA) for the final Transport Rule (CSAPR) Docket ID No. EPA-HQ-OAR-2009-0491, Office of Air and Radiation, June 2011. Available on the Internet at <http://www.epa.gov/airtransport/pdfs/FinalRIA.pdf>

²³ This rule established a national program consisting of new standards for model year 2014 through 2018 heavy-duty vehicles that will reduce greenhouse gas emissions and improve fuel economy. The majority of projected monetized benefits are associated with greenhouse gas reductions and consumer fuel savings related to reduced ^{oil consumption}.

²⁴ U.S. Environmental Protection Agency and the National Highway Traffic Safety Administration, U.S. Department of Transportation. 2011. Final Rulemaking to Establish Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles: Regulatory Impact Analysis, August 2011. Available on the Internet at <http://www.epa.gov/otaq/climate/documents/420r11901.pdf>

²⁵ U.S. Environmental Protection Agency. 2011. *Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards*, Office of Air & Radiation, December 2011. Available on the Internet at <http://www.epa.gov/ttn/ecas/regdata/RIAs/matsriafinal.pdf>

5. Do you consider the level of air quality that is established through the NAAQS process, including peer review by science advisors, to result in an "arbitrary" threshold; or do you believe that the NAAQS standard represents a level of air quality that is protective of public health, including sensitive populations, with an adequate margin of safety, as required by the Clean Air Act?

a. If the NAAQS standards protect the public health with an adequate margin of safety, explain how can the EPA estimate that short-term exposure to air in attainment areas would result in hundreds of thousands of deaths each year?

Response: National ambient air quality standards (NAAQS) do not represent "arbitrary" thresholds. In setting primary (health-based) standards that are requisite to protect public health with an adequate margin of safety, EPA's task is to establish standards that are neither more nor less stringent than necessary for that purpose, see *Whitman v. American Trucking Assn's*, 531 U.S. 457, 473 (2001), recognizing that the Clean Air Act does not require the Administrator to establish a primary NAAQS at a zero risk-level, but rather at a level that reduces risk sufficiently as to protect public health with an adequate margin of safety. See *Lead Industries v. EPA*, 647 F.2d at 1156 n. 51. In addressing the requirement for an adequate margin of safety, EPA considers such factors as the nature and severity of the health effects involved, the size of at-risk populations, the strengths and limitations of the scientific evidence and related uncertainties, and whether discernible thresholds have been identified below which health effects do not occur. Standards are established to provide protection for a representative sample of persons comprising at-risk populations rather than to the most susceptible single person in such groups. Even in areas that meet the current standards, individual members of at-risk populations may at times experience health effects related to air pollution. The absence of evidence of a threshold below which health effects would not occur is one factor that the Administrator takes into consideration in selecting a NAAQS, including the level of the NAAQS, that in her judgment is sufficient to protect the public from the risks of adverse health effects, with an adequate margin of safety, but is not more stringent than necessary. The question incorrectly implies that EPA estimates that short-term exposure to air in attainment areas would result in hundreds of thousands of deaths each year. EPA has not conducted a national scale assessment of premature mortality associated with *short-term* PM_{2.5} exposure to air in attainment areas. Rather, EPA has estimated the risk in a number of urban study areas associated with simulating ambient conditions to just meeting the current standards as well as alternative standards under consideration.²⁶ Furthermore, as discussed in the response to question 7 below, EPA conducted a national scale assessment of premature mortality related to *long-term* PM_{2.5} exposure across all areas in the country.

6. Please provide any scientific studies EPA has relied upon to show a causal or associative relationship between fine particulate matter and premature mortality at levels below what EPA calls the "Lowest Measured Level" in the Pope and the Laden studies.

Response: EPA relies on the *Integrated Science Assessment (ISA) for Particulate Matter* (U.S. EPA, 2009) as the scientific basis for the determination that inhalation of PM_{2.5} is causally associated with premature death. Additionally, the scientific evidence indicates that there is no evidence of a threshold below which health effects do not occur. For example, after performing an extensive analysis of the

²⁶ U.S. Environmental Protection Agency, 2010. *Quantitative Health Risk Assessment for Particulate Matter*. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, EPA-452/R-10-005. June 2010. Available on the Internet at http://www.epa.gov/ttn/naaqs/standards/pm/data/PM_RA_FINAL_June_2010.pdf.

Harvard Six Cities cohort, Schwartz et al. (2008)²⁷ were unable to discern such a population threshold between exposure to PM_{2.5} and premature mortality. In addition, the recent reanalysis of the American Cancer Society cohort by Krewski et al. (2009) demonstrates mortality effects associated with long-term exposure to PM_{2.5} across cities with a range of PM_{2.5} concentrations, some of which were below the LMLs observed in the Pope and Laden studies.²⁸ Consistent with the conclusions presented in the ISA, numerous peer-review panels and nationally and internationally recognized air pollution experts have concluded that there is a lack of evidence for a threshold in the PM_{2.5} mortality relationship. EPA recently summarized the scientific review statements related to the issue of thresholds in the concentration-response function for PM_{2.5} mortality in a Technical Support Document appended to several recent RIAs.²⁹

7. According to the most recent Particulate Matter Risk Assessment, EPA estimates that "total PM_{2.5}-related premature mortality ranges from 63,000 and 88,000" each year above the lowest measured level. EPA's estimate of benefits from the CSAPR rule, which involves almost all PM-related benefits, notes that mortality, ranges between 130,000 and 320,000 deaths per year.

a. Please explain how EPA came to these two different estimated mortality ranges.

b. Please explain the basis for EPA's monetization of a dramatically higher number than is identified in the peer-reviewed Risk Assessment.

c. Did you or the Assistant Administrator for Air and Radiation approve the public report of a dramatically higher number?

d. If so, please provide all documents relating to such approval.

e. If not, please explain why not.

Response: It is important to note that the CSAPR RIA estimate you reference in your question describes the overall public health burden of recent levels of PM_{2.5} and ozone relative to policy relevant background levels,³⁰ and not the number of avoided premature deaths associated with emission reductions required by the CSAPR, which are estimated separately and reported in Table 5-17 of the CSAPR RIA.³¹

The most recent Quantitative Health Risk Assessment for Particulate Matter and the CSAPR RIA provide similar estimates of the PM_{2.5}-related mortality. As you note in your letter, in the *Quantitative Health*

²⁷ Schwartz J, Coull B, Laden F. (2008). "The Effect of Dose and Timing of Dose on the Association between Airborne Particles and Survival." *Environmental Health Perspectives*. 116: 64-69.

²⁸ The lowest concentration reported by Krewski et al. (2009) was 5.8 µg/m³.

²⁹ U.S. Environmental Protection Agency. 2010. *Technical Support Document: Summary of Expert Opinions on the Existence of a Threshold in the Concentration-Response Function for PM_{2.5}-related Mortality*. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, Research Triangle Park, NC. June. Available on the Internet at: www.epa.gov/ttn/ecas/regdata/Benefits/thresholdstd.pdf

³⁰ Fann N, Lamson AD, Anenberg SC, Wesson K, Risley D, Hubbell B. 2012. "Estimating the national public health burden associated with exposure to ambient PM_{2.5} and ozone." *Risk Analysis*. 32(1): 81-95. DOI: 10.1111/j.1539-6924.2011.01630.x

³¹ U.S. Environmental Protection Agency. 2011. *Regulatory Impact Analysis for the Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone in 27 States; Correction of SIP Approvals for 22 States*. Office of Air and Radiation June 2011. Available on the Internet at: <http://epa.gov/airtransport/pdfs/FinalRIA.pdf>.

Risk Assessment for Particulate Matter, EPA estimated that “total PM_{2.5}-related premature mortality [resulting from 2005 PM_{2.5} levels] ranges from 63,000 (39,000—87,000) (95th percentile confidence interval) to 88,000 (49,000—130,000), respectively; in each case we estimated deaths per year down to the lowest measured levels (LMLs) in each epidemiological study” (pg G-2). In this same report, EPA also estimated 110,000 to 360,000 PM_{2.5}-related mortalities attributable to 2005 PM_{2.5} levels relative to policy relevant background levels, which in most locations is well below the LML from the epidemiology studies. This estimate is comparable to the total PM_{2.5}-related mortality estimates cited in the CSAPR RIA of 130,000 to 320,000 premature PM_{2.5}-related deaths, which also are based on policy relevant background levels. The estimates reported in the CSAPR RIA are slightly different, because they were generated using more recent air quality information.

As noted in our response above, while we have higher confidence in the estimate of health impacts associated with exposure to PM_{2.5} concentrations above the LML in the underlying epidemiology studies, the available evidence supports a no-threshold model. This means that it is appropriate to include estimates of mortality associated with exposure to even relatively low levels of PM_{2.5}, while acknowledging that there is some additional uncertainty regarding the magnitude of health effects attributable to these exposures. Thus, while we have the highest confidence that PM_{2.5}-related mortality impacts in 2005 were at least 63,000 to 88,000, as reported in the PM risk assessment, the best estimates for characterizing the overall public health burden of recent levels of PM_{2.5} and ozone is the estimate of 130,000 to 320,000 premature deaths as summarized in the CSAPR RIA.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 04 2012

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20510

OFFICE OF CONGRESSIONAL AND
INTERGOVERNMENTAL RELATIONS

Dear Mr. Chairman:

Consistent with discussions with your staff, enclosed is a supplement to Assistant Administrator Gina McCarthy's February 3, 2012 response to your December 14, 2011 letter to Administrator Jackson regarding the Environmental Protection Agency's estimates of the public health benefits expected to result from regulatory actions.

The first enclosure provides additional information responsive to question 1 in your letter. Consistent with discussions with your staff, it further describes the process through which the EPA, in late 2008 and early 2009, updated its approach to calculating the benefits associated with reduction in fine particulate matter emissions.

The second enclosure is a document responsive to the request, in item 1.c of your December 14 letter, for "analyses and briefing or decision memoranda, for the EPA Administrator or EPA Assistant Administrator for Air and Radiation, relating to the change in assumptions." The enclosed document is a page from a March 23, 2009, briefing for the Administrator with regard to the then-draft proposal for Portland Cement National Emissions Standards for Hazardous Air Pollutants. It reflects estimates of the costs and benefits of two different regulatory options, including estimates under both the "old" and the updated methodologies for calculating benefits. The remainder of the relevant briefing is not responsive to your request.

Please note that this document implicates important agency confidentiality interests because it reflects non-public deliberations. Although we recognize the importance of the Committee's oversight functions, the EPA is concerned about further disclosure of this document for a number of reasons. First, because the document reveals deliberative information of the agency, the EPA is concerned about the chilling effect that would occur if agency employees believed their frank and honest opinions and analysis were to be disclosed in a broad setting. In addition, further disclosure could result in misunderstanding or misrepresentation of the purposes and rationale for the relevant EPA actions. This document is pre-decisional and may not reflect the agency's full and complete thinking on the relevant matters, which is provided in the final, public documents setting forth the relevant agency actions -- in this case the relevant notice of proposed rulemaking and supporting analysis.

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Accordingly, we have added a watermark to this document that reads "Internal Deliberative Document of the U.S. Environmental Protection Agency; Disclosure Authorized Only to Congress for Oversight Purposes." Through this accommodation, the EPA does not waive any confidentiality interests in this document or any similar documents in other circumstances. The EPA respectfully requests the Committee and its staff protect the document and the information contained in it from further dissemination. Should the Committee determine that its legislative mandate requires further distribution of this information outside the Committee, we request that such need first be discussed with the agency to help ensure the EPA's confidentiality interests are protected to the fullest extent possible.

Thank you for your interest in this important subject. If you have questions, please contact me or have your staff contact Tom Dickerson in my office at (202) 564-3638.

Sincerely,



Arvin Ganesan
Associate Administrator

cc: The Honorable Henry Waxman
Ranking Member

Enclosures

ENCLOSURE

Supplemental Answer to Question 1 of the December 14, 2011 Letter

NOTE: This supplements the answer that was enclosed in Assistant Administrator Gina McCarthy's February 3, 2012 letter.

Question 1.b.: If EPA changed the assumption, explain who gave ultimate direction to change the assumption, when was it changed, and what was the basis for making the change.

The decision to return to a no-threshold approach for estimating the benefits of reducing PM 2.5 exposures was based on the EPA's assessment of the science and flowed from staff recommendations that were elevated through the appropriate management chain and regulatory development process.

As noted in Assistant Administrator McCarthy's letter of February 3, 2012, the EPA used a no-threshold approach to develop our main PM 2.5 benefits estimates for Clean Air Act rules from 1997 to 2006. This approach was based on the scientific literature showing that health effects can occur along the entire range of potential exposures to fine particles. In 2006, as the letter notes, the EPA changed its long-standing approach and applied an assumed threshold for the main benefits estimates of the 2006 PM NAAQS. As a result, the main benefits estimates for all regulatory analyses of regulations reducing exposure to PM2.5 conducted between 2006 and 2009 (when EPA returned to the no-threshold approach) reflected an assumption that there were no benefits associated with reducing PM2.5 below 10 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

In November 2008, several of the EPA's benefits analysts at the Office of Air Quality Planning & Standards (OAQPS) recommended changes to PM benefits analyses to improve the technical basis and scientific credibility of our benefits estimates for air quality regulations, including a recommendation that the EPA change the assumptions regarding applying thresholds to PM2.5 mortality estimates. The staff recommended using a non-threshold approach to estimating PM benefits for the main estimates because they believed that the current science did not support the application of concentration thresholds to epidemiologically-derived PM mortality estimates. The staff identified the then-upcoming Reciprocating Internal Combustion Engine (RICE) NESHAP proposal and Portland cement NSPS and NESHAP proposals as the rules that should be affected first by this change.

In December 2008, the EPA's Office of Research and Development released the first draft of the Integrated Science Assessment for PM for public comment. That assessment confirmed that there is no scientific evidence supporting an assumption of a threshold for PM2.5-related effects. That same month, and in January 2009, the benefits staff presented their recommendation of a no-threshold approach internally -- to other members of their benefits team, the science advisor for their division, and several OAQPS managers -- before presenting them to, and receiving

endorsement from, OAR's Office of Policy Analysis and Review and the agency's National Center for Environmental Economics (part of the Office of Policy) in February 2009.

The EPA sent a draft of the benefits analysis for the RICE NESHAP proposal to the Office of Management and Budget (OMB) that used the no-threshold approach. However, because the OMB had an unusually short period to review the draft RICE proposal and the Regulatory Impact Analysis (RIA), the EPA agreed to remove the no-threshold approach from that RIA and wait until the upcoming proposed cement rules to make the change. The RICE rule was proposed Feb. 25, 2009; the accompanying RIA used the threshold-based approach in its PM benefits analysis.

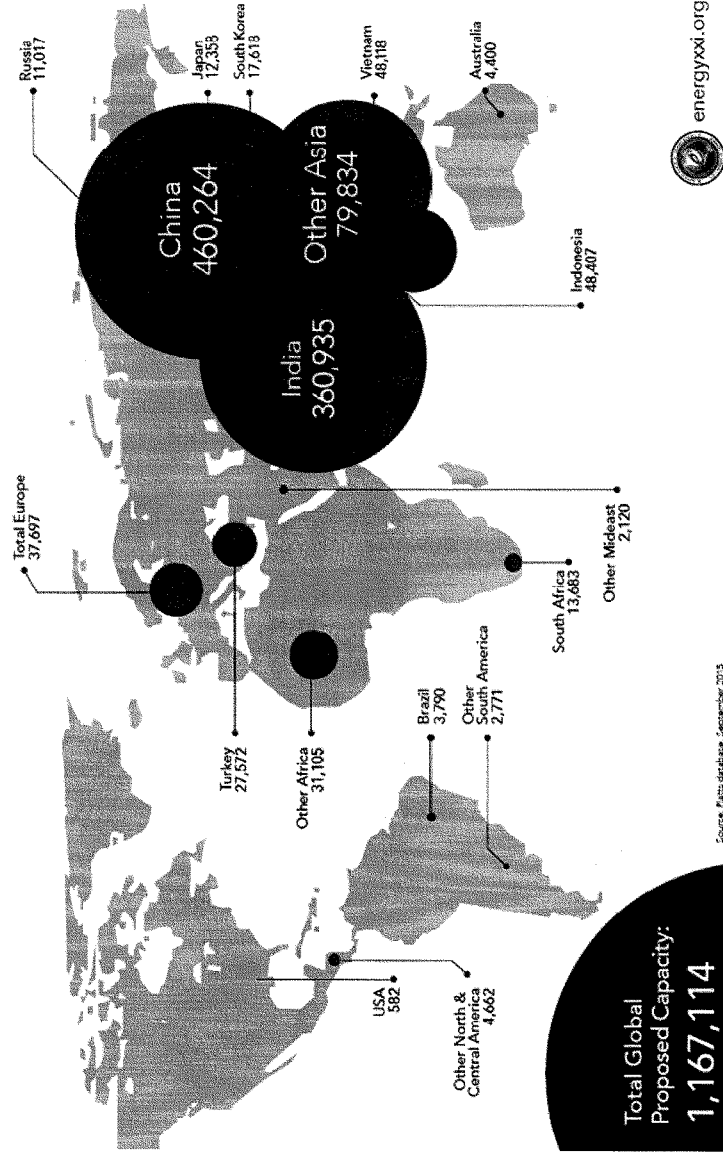
During a March 2009 options selection meeting for the Administrator on the proposed Portland cement rules, the no-threshold methodology was mentioned. As that proposal and the accompanying RIA moved forward through the standard interagency review process, the EPA and OMB had several discussions on the methodology change, which was included in the RIA for the proposed Portland cement rules. In that proposal, which was signed April 21, 2009, the agency specifically sought comment on the use of the no-threshold approach. The EPA staff considered the comments received, along with advice from outside advisory panels, in developing the final RIA for the Portland cement rules. That final RIA (and all subsequent RIAs) used the no-threshold approach, which is fully supported by the scientific literature on the health effects of fine particles.

Question 1.c.: If EPA changed the assumption, provide all analyses and briefing or decision memoranda, for the EPA Administrator or EPA Assistant Administrator for Air and Radiation, relating to the change in assumptions.

Please see the enclosed document.

Coal-fired Power Plants Planned and Under Construction

Total installed capacity (megawatts)



Estimated Costs and Benefits of Proposed Cement NESHAP

	Emissions Reductions ^a	Total Annualized Costs (millions of 2005\$)	Updated Benefits ^{**} Methodology (millions of 2005\$)	Old Benefits ^b Methodology (millions of 2005\$)
Total with HCl MACT option	6,300 tpy PM _{2.5} 139,240 tpy SO ₂	\$360 (engineering costs) \$700 ^c (social costs)	\$4,400 to \$11,000 (620 to 1,600 avoided premature mortalities)	\$3,100 to \$6,500
Total with HCl Health- based option	6,100 tpy PM _{2.5} 14,500 tpy SO ₂	\$260 (engineering costs)	\$1,400 to \$3,500 (200 to 520 avoided premature mortalities)	\$1,200 to \$2,400

^a Assumes PM_{2.5} fraction is 45%. Includes emission reductions from existing kilns and assumes 20 new kilns by 2013. Includes emission reductions from controls on HCL, THC, and Hg.

^b Benefits estimates are for the year 2013.

^c Includes compliance costs and costs to consumers due to increases in cement prices.

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2927
Minority (202) 225-3641

July 27, 2016

Ms. Janet McCabe
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Ms. McCabe:

Thank you for appearing before the Subcommittee on Energy and Power on July 6, 2016, to testify at the hearing entitled "A Review of EPA's Regulatory Activity During the Obama Administration: Energy and Industrial Sectors."

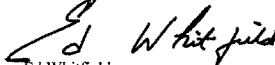
Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

Also attached are Member requests made during the hearing. The format of your responses to these requests should follow the same format as your responses to the additional questions for the record.

To facilitate the printing of the hearing record, please respond to these questions and requests with a transmittal letter by the close of business on August 10, 2016. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed in Word format to Will.Batson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Ed Whitfield
Chairman
Subcommittee on Energy and Power

cc: The Honorable Bobby Rush, Ranking Member, Subcommittee on Energy and Power

Attachments



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 02 2016

OFFICE OF
CONGRESSIONAL AND
INTERGOVERNMENTAL
RELATIONS

The Honorable Pete Olson
Vice Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

Dear Vice Chairman Olson:

Enclosed please find the U.S. Environmental Protection Agency's responses to the Subcommittee's questions for the record following the July 6, 2016, hearing titled "A Review of EPA's Regulatory Activity During the Obama Administration: Energy and Industrial Sectors."

I hope this information is helpful to you and the members of the Subcommittee. If you have further questions, please contact me or your staff may contact Matthew Davis in the EPA's Office of Congressional and Intergovernmental Relations at davis.matthew@epa.gov or at (202) 564-1267.

Sincerely,

Tristan Brown
Deputy Associate Administrator

Enclosure

cc: The Honorable Bobby Rush
Ranking Member, Subcommittee on Energy and Power

Attachment 1—Additional Questions for the RecordThe Honorable Ed Whitfield

1. According to a recent report issued by the Competitive Enterprise Institute, the total annual compliance costs of EPA regulations are now approximately \$386 billion.¹ If this estimate is not accurate, please provide the agency's best estimate of the current annual compliance costs for its rules.

Response: The EPA does not estimate annual benefits or annual compliance costs for a single year for all of its regulations because the year of analysis differs among programs.

2. Pursuant to Executive Order 12866, which addresses regulatory planning and review, a "significant regulatory action" includes an action that is likely to result in a rule that may "[h]ave an annual effect on the economy of \$100 million or more." Pursuant to Executive Order 12866, such regulatory actions must be submitted for review by Office of Management and Budget (OMB).
 - A. Please identify each rule issued by EPA since 2009 which imposes costs of \$100 million or more in any one year, and the agency's estimate of the compliance costs.
 - B. Please identify each rule proposed but not yet finalized which would impose costs of \$100 million or more in any one year, and the agency's estimate of the compliance costs.
 - C. Does EPA track the *total* compliance costs of its "significant regulatory actions"? If yes, please provide the total costs for each of the years 2009 through the present.

Response: The EPA does not maintain a list of all regulations that have been deemed economically significant, a test that includes factors beyond just the \$100 million per year analysis.

3. The EPA's rule disapproving Oklahoma's and Texas's plans for controlling regional haze and imposing EPA's own federal plan was recently stayed by the federal courts. This rule is estimated by affected stakeholders to impose costs of \$2 billion.
 - A. Did EPA submit this federal plan to OMB for review? If not, why not?

Response: No, the determination was made that this federal plan was not a "significant regulatory action" pursuant to E.O. 12866.

¹ See "Ten Thousand Commandments, An Annual Snapshot of the Federal Regulatory State, 2016 Edition" available at <https://cei.org/sites/default/files/Wayne%20Crews%20-%20Ten%20Thousand%20Commandments%202016%20-%20May%204%202016.pdf>.

B. Does EPA submit federal plans developed pursuant to the Clean Air Act that impose costs in excess of \$100 million for OMB and interagency review? If not, why not?

Response: EPA includes federal plans that fall within the definition of “regulatory actions” in the significance determination process with the Office of Management and Budget (OMB) in order to determine whether the action is “significant” as defined within EO 12866. If the regulatory action is determined to be significant, then the federal plan is submitted to OMB for review.

C. Is there any interagency review of such federal plans as they are developed?

Response: EPA routinely consults with the interagency community, as appropriate. For example, we routinely consult with Federal Land Managers during the development of rules addressing visibility impairment in our national parks and wilderness areas.

4. In Questions for the Record following the Energy and Commerce Committee’s March 22, 2016 hearing regarding the EPA’s Fiscal Year 2017 Budget, we asked for the agency’s estimate of the total cost of the “Mercury and Air Toxics Standards.” In response, EPA declined to provide a specific amount, and instead stated that “The EPA determined the projected annual cost of MATS is a small fraction when compared to overall sales in the power sector-between just 2.7 and 3.5 percent of annual electricity sales from 2000 to 2011. The EPA also determined that annual compliance capital and operating expenditures to comply with MATS are a small fraction of the industry’s capital and operating expenditures in historical context.”

A. What is the approximate dollar amount of 2.7 percent of annual electricity sales from 2000 to 2011?

B. What is the approximate dollar amount of 3.5 percent of annual electricity sales from 2000 to 2011?

C. What is the approximate amount EPA determined would be the annual compliance capital and operating expenditures to comply with MATS?

Response: The EPA estimated the annual costs of complying with MATS to be \$9.6 billion, as compared to annual benefits of \$37-\$90 billion. Further detail can be found in the final RIA at: <https://www3.epa.gov/ttnecas1/regdata/RIAs/matsriafinal.pdf>. Furthermore, the EPA issued a final supplemental finding on April 14, 2016. In that final supplemental finding, the EPA discussed the costs and benefits of the rule beginning on page 24423. The final finding was published in the Federal Register on April 25, 2016 and can be found at: <https://www.gpo.gov/fdsys/pkg/FR-2016-04-25/pdf/2016-09429.pdf>.

5. EPA published its 111(b) rule setting carbon dioxide standards for new coal-fired power plants in October 2015. In response to questions for the record concerning the

technical and economical readiness of CCS for new coal-fired power plants following the Committee's March 22, 2016 EPA budget hearing with EPA Administrator McCarthy, EPA states that "assertions about SaskPower Boundary Dam Unit 3 operational failures have been largely misstated or mischaracterized." EPA states further that "The carbon dioxide (CO₂) capture system at SaskPower Boundary Dam is operating successfully.... Operational issues in the first year of operation were related largely to ancillary systems and not to the carbon capture system, and appear to have been successfully resolved."

This response does not square with current facts concerning the capture technology, as reported by SaskPower. For example, a July 2016 statement in SaskPower's own Boundary Dam performance report for June explicitly identifies unresolved problems with the carbon capture system, fully 20 months after startup and eight months after a major renovation. Following a maintenance outage just in May, SaskPower reports for June that the "facility needed to be taken down on separate occasions due to issues with the chemistry of the capture process. The chemical compound used at the core of the CCS process (amine) is affected by heat and by fly ash (coal particulates). This meant the amine and the complex chemistry behind it needed to be analyzed and fixes identified. A permanent solution is also being worked on."

- A. Please explain whether and to what extent EPA has directly validated that the CCS process has been (a) "operating successfully" and (b) that issues concerning chemistry of the capture process have been adequately resolved.
- B. Explain how EPA's due diligence concerning ongoing technical and economic issues surrounding CCS operations at electric power generating units have been analyzed and documented by the agency.

Response: According to reports on SaskPower's website (www.saskpower.com), the CCS system at Boundary Dam is operating highly successfully. In June 2016, the CCS system captured and removed over 62,000 tonnes of CO₂, at a capture rate exceeding the rate on which the EPA new source standard is predicated. The amount of CO₂ captured in June also exceeds the amount required by contract to be delivered for enhanced oil recovery. Also in June, as your question notes, the system went off-line briefly to deal with certain issues that are not directly associated with the carbon capture system but, rather, with supporting or ancillary systems. The company's July 2016 report indicates that the minor, ancillary issues were resolved, stating:

"The CCS facility at Boundary Dam Power Station performed well in July. It successfully captured 76,546 tonnes of carbon dioxide, while operating nearly 100 per cent of the hours in the month, slowing down for 15 minutes near the end of the month. This means the carbon capture unit has surpassed the capture of a million tonnes of carbon dioxide since it began operations in October 2014.

To increase daily production and potentially reduce periodic maintenance outages, SaskPower has applied new equipment to filter the amine solution at the centre of the process. This has been online for approximately 10 days and has so far reduced degradation of the amine solution by more than half.

The process remains on track to capture 800,000 tonnes in 2016. Importantly, SaskPower continues to meet emission regulations and the needs of its off-taker."
 (<http://www.saskpower.com/about-us/blog/bd3-status-update-july-2016/>)

Also note that on April 29, 2016, the EPA denied five petitions for reconsideration of the Carbon Pollution Standards, based on the agency's affirmation of the robust analytical approach in the final rule. Following a process outlined in the Clean Air Act, the EPA carefully considered the variety of technical and legal issues raised in the petitions, including those regarding the performance and cost of CCS technology. After reviewing these petitions, the EPA confirmed that CCS is performing well and that none of the issues raised in the petitions alter the EPA's determination in the final rule that partial CCS is adequately demonstrated and can be implemented at a reasonable cost. See "Basis for Denial of Petitions to Reconsider the CAA Section 111(b) Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Utility Generating Units" which details the agency's rationale for denial of those petitions for reconsideration can be found at: <https://www.epa.gov/cleanpowerplan/carbon-pollution-standards-petitions-reconsideration-april-2016>.

6. **You stated during your testimony that EPA consulted with and obtained assurances from equipment vendors or contractors that a coal-fired power plant could be built with CCS technologies to meet the new standards. In addition, in response to questions for the record concerning the technical and economical readiness of CCS following the Committee's March 22, 2016 budget hearing with Administrator McCarthy, EPA references "a discussion in the final rule of commercial vendors who offer carbon capture technology and provide performance guarantees."**
 - A. **Has EPA specifically confirmed that commercial vendors will offer CCS technology with performance guarantees for utility scale electric power generating units?**
 - B. **If yes, which equipment vendor or contractor(s) did EPA consult with and obtain such guarantees?**

Response: In the final rule, published on October 23, 2015, the EPA discussed vendor guarantees, including performance guarantees from vendors, public statements from industry officials, and review of the literature starting on page 64554. The final rule can be found at: <https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22837.pdf>.

7. **In its final Section 111(b) rule setting carbon dioxide standards for new coal-fired power plants issued last year, EPA cited two commercial scale power plant CCS projects in the United States, including the Kemper Project and Texas Clean Energy Project, and a small CCS power plant project in Canada, known as Boundary Dam. Since the rule was finalized these projects have continued to be subject to significant controversy, including with regard to technological and cost issues.**

- A. What is the current status of the Texas Clean Energy Project?**
- B. Is EPA continually monitoring the technological and cost issues relating to the development and deployment of CCS for the power sector?**
- C. If yes, please explain what EPA is doing to monitor the technological and economic feasibility of CCS for the power sector?**
- D. Is EPA updating its cost estimates for CCS for the power sector? If yes, what is EPA's updated cost estimate for CCS technologies for a new coal-fired electric generating unit?**

Response: The developers of the TCEP would be best positioned to inform you about the status of that project. The EPA continually strives to keep abreast of technical and economic developments, but is not currently revisiting the regulatory determinations it made through notice-and-comment rulemaking.

- 8. When EPA finalized its 111(d) rule for fossil fuel-fired electric generating units, referred to by the agency as the "Clean Power Plan," the agency also proposed "Model Trading Rules." According to its website, EPA plans to finalize the model trading rules this August.**

- A. Is that accurate?**

Response: No.

- B. Does EPA plan to finalize the model trading rules before the end of the Administration?**

Response: Many states have asked EPA to move forward with our outreach and to continue providing support and developing tools related to the Clean Power Plan. We are developing these tools in a way that is consistent with the Supreme Court's stay of the Clean Power Plan.

- C. If EPA finalizes the model trading rules, would that mean a state or affected party that wants to challenge the rules would have to take legal action within 60 days, or forego that right?**

Response: If an action of the EPA is judicially reviewable under the Clean Air Act, that review generally is governed by section 307.

- 9. Under Section 109(d)(2)(c)(iv) of the Clean Air Act, the Clean Air Scientific Advisory Committee (CASAC) is directed to advise EPA of "any adverse public health, welfare,**

social, economic or energy effects which may result from various strategies for attainment of national ambient air quality standards.” In Questions for the Record following the Energy and Commerce Committee’s March 22, 2016 hearing regarding the EPA Fiscal Year 2017 Budget, we asked why EPA had not requested CASAC provide advice on adverse effects relating to implementing national ambient air quality standards (NAAQS). In response, EPA stated that Section 109(d)(2)(c)(iv) “does not require that CASAC provide this advice as part of the five year review cycle. Moreover, when the Supreme Court in *Whitman v. American Trucking Associations*, 531 U.S. 457 (2001), held that the EPA could not consider implementation and other costs in setting the NAAQS, the Court further held that any CASAC advice related to costs of implementation . . . would not be relevant to the EPA’s review of the NAAQS.”

- A. Section 109(d)(2)(c)(iv) does not refer solely to costs, but also to “adverse public health, welfare, social . . . or energy effects.”
 - i. Does EPA maintain adverse public health effects should not be considered in setting or reviewing NAAQS?
 - ii. Does EPA maintain adverse welfare effects should not be considered in setting or reviewing NAAQS?
 - iii. Does EPA maintain adverse welfare, social or energy effects should not be considered or is not relevant in setting or reviewing NAAQS?
- B. For any current or planned CASAC review of criteria pollutants, will EPA request CASAC consider potential adverse effects in their review, as required by the statute?
- C. Is CASAC considering adverse effects of implementing any of the existing NAAQS?
- D. Does EPA maintain that Section 109(d)(2)(c)(iv) is an optional provision of the CAA and does not impose any obligations on the agency?

Response: Consistent with direction from the courts, the EPA considers all advice from CASAC that is pertinent to setting the NAAQS under section 109, including all effects on public health and welfare, whether beneficial or adverse.

- 10. We understand EPA recently has made amendments to its Boiler MACT and other air toxics rules to remove the affirmative defense to civil penalties for violations caused by malfunctions.
 - A. Is that correct?
 - B. Is it correct that EPA plans to exercise “case-by-case enforcement discretion” whenever a source may have failed to meet air toxics standards as a result of a malfunction?
 - C. Does this mean every time there is a malfunction a facility could be subject to an enforcement action by EPA or citizen suit?

- D. Is it correct that Congress recognized that malfunctions do occur in the real world and has EPA historically recognized this as well, and not treated malfunctions as enforcement triggers?**
- E. It appears this new case-by-case discretion increases uncertainty about litigation and enforcement risks pertaining to malfunctions. Explain why EPA chose not to promulgate standards that account for malfunctions and so help avoid increased enforcement and litigation uncertainty?**

Response: EPA has removed affirmative defense provisions from several air toxics rules. The reasoning behind the EPA's approach to malfunctions and removal of affirmative defense provisions is based on D.C. Circuit opinions addressing the issue including Natural Resources Defense Council v. EPA, 749 F.3d 1055 (D.C. Cir 2014) and was recently affirmed in the July 29, 2016 D.C. Circuit decision in U.S. Sugar v. EPA, No.11-1108. EPA's approach is also discussed in several rulemakings including the preamble to the Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards Proposal published June 30, 2014 at 79 FR 36880, 36944-46.

- 11. In the EPA's 2012 standards for the oil and gas sector, EPA expanded the source category list to include any oil and gas operation and equipment that were not previously regulated.**
 - A. What was the rationale for expanding the sector without an endangerment finding?**
 - B. Is this an approach EPA believes it can take for the more than 70 other source categories regulated under the New Source Performance Standards Program?**

Response: The EPA did not expand the source category list in the 2012 NSPS rulemaking. Sources covered by the 2012 standards were within the listed oil and gas source category.

- 12. EPA is beginning to pursue regulations targeting hundreds of thousands of existing oil and natural gas wells currently regulated by states.**
 - A. Is EPA planning to propose or finalize regulations before the end of the Administration?**
 - B. Is EPA currently considering setting individual state methane targets or budgets similar to what the agency has done in the Clean Power Plan for the power sector?**
 - C. Is EPA currently developing a proposed "federal plan" that would apply to existing sources in the oil and gas sector similar to what has been proposed for the Clean Power Plan?**

Response: The Information Collection Request (ICR) process, which is governed by the Paperwork Reduction Act, provides the public two opportunities to review drafts of the ICR. The comment period on the first draft of the ICR closed August 2, 2016. The EPA reviewed those comments and issued a second draft of the ICR that was available for public comment until October 31, 2016 while it was under review at OMB. After additional review and input, including from external stakeholders, the final ICR was issued to industry on November 10, 2016 after completing OMB review and receiving a valid OMB control number. Any future proposed or final rules regulating existing oil and gas sources would be developed after a review of the information received through this public process.

13. Concerning Section 321 of the Clean Air Act, which provides: “The Administrator shall conduct continuing evaluations of potential loss or shifts of employment which may result from the administration or enforcement of the provision of [the Clean Air Act] and applicable implementation plans, including where appropriate, investigating threatened plant closures or reductions in employment allegedly resulting from such administration or enforcement.”

- A. In 1991, Energy and Commerce Committee Chairman Dingell made requests to EPA concerning at least two specific instances the Committee believed required EPA investigations pursuant to Section 321. One incident concerned the shutdown of Bethlehem Steel’s Sparrows Point facility and another involved furniture makers in California. Please explain the disposition of these cases/requests and describe any EPA findings.**
- B. Please explain how EPA gathered information concerning these cases and the basis for its resulting decisions.**
- C. Please explain EPA’s coordination with the Department of Labor and Department of Commerce, which also were notified of the worker protection provisions and the requirement for investigation.**

Response: The EPA is not aware of any records relating to this Congressional inquiry from 25 years ago.

14. Describe all cases that EPA has investigated pursuant to Section 321, and EPA’s procedures for investigating those cases.

Response: The EPA evaluates potential losses or shifts of employment that may result from the provisions of the Clean Air Act as reflected in numerous Regulatory Impact Analyses, Economic Impact Assessments and other economic research. The EPA is aware of a 1981 report pursuant to section 321(b) of an investigation in response to allegations concerning a Montana site of Anaconda Copper Company.

The Honorable Bill Flores

1. In the “Clean Power Plan,” EPA maintains Section 111(d) of the Clean Air Act authorizes the agency to set emissions limits for power plants based not on what is achievable by individual electric generating units, but by going “beyond the fence.” EPA effectively redefines the source being regulated as being not the actual unit, but instead taking a “system wide” approach and looking at state electricity resource planning overall.

A. Is EPA considering a similar system wide approach for the oil and gas sector?

B. Can you rule out such an approach, categorically?

Response: On May 12, 2016, the EPA issued three final rules that together will curb emissions of methane and smog-forming volatile organic compounds (VOCs) from new, reconstructed and modified oil and gas sources, while providing greater certainty about Clean Air Act permitting requirements for the industry.

The EPA also took a critical step needed to carry out the Administration’s commitment to regulate methane emissions from *existing* oil and gas sources: the agency issued for public comment an Information Collection Request (ICR) that will require companies to provide extensive information instrumental for developing comprehensive regulations to reduce methane emissions from existing oil and gas sources.

The ICR process, which is governed by the Paperwork Reduction Act, provides the public two opportunities to review drafts of the ICR. The comment period on the first draft of the ICR closed August 2, 2016. The EPA reviewed those comments and issued a second draft of the ICR that was available for public comment until October 31, 2016 while it was under review at the Office of Management and Budget (OMB). After additional review and input, including from external stakeholders, the final ICR was issued to industry on November 10, 2016 after completing OMB review and receiving a valid OMB control number. Any future proposed or final rules regulating existing oil and gas sources would be developed after a review of the information received through this public process.

2. Under the “Clean Power Plan,” EPA has also maintained that it can set carbon dioxide targets for each state’s electricity sector which effectively can only be met by participating in state, regional, or federal emissions trading programs to mitigate the huge costs of the resources shifting.

A. Is EPA considering a similar state targets approach for each state’s oil and gas sector?

B. Can you rule out a regulatory cap-and-trade approach categorically for the oil and gas sector?

C. Can you rule out categorically EPA requiring changes to a state’s oil and gas resource planning?

Response: On May 12, 2016, the EPA issued three final rules that together will curb emissions of methane and smog-forming VOCs from new, reconstructed and modified oil and gas sources, while providing greater certainty about Clean Air Act permitting requirements for the industry.

The EPA also took a critical step needed to carry out the Administration's commitment to regulate methane emissions from *existing* oil and gas sources: the agency issued for public comment an ICR that will require companies to provide extensive information instrumental for developing comprehensive regulations to reduce methane emissions from existing oil and gas sources.

The ICR process, which is governed by the Paperwork Reduction Act, provides the public two opportunities to review drafts of the ICR. The comment period on the first draft of the ICR closed August 2, 2016. The EPA reviewed those comments and issued a second draft of the ICR that was available for public comment until October 31, 2016 while it was under review at OMB. After additional review and input, including from external stakeholders, the final ICR was issued to industry on November 10, 2016 after completing OMB review and receiving a valid OMB control number. Any future proposed or final rules regulating existing oil and gas sources would be developed after a review of the information received through this public process.

3. The EPA's unprecedented 111(d) regulations for the electricity sector have been stayed by the U.S. Supreme Court, in response to legal challenges brought by 27 states

A. Given many of the same issues relating to the scope of the agency's authority are likely to be raised, would it make sense to determine the legality of the "Clean Power Plan" before moving forward with 111(d) rules for the oil and gas sector?

Response: On May 12, 2016, the EPA issued three final rules that together will curb emissions of methane and smog-forming VOCs from new, reconstructed and modified oil and gas sources, while providing greater certainty about Clean Air Act permitting requirements for the industry.

The EPA also took a critical step needed to carry out the Administration's commitment to regulate methane emissions from *existing* oil and gas sources: the agency issued for public comment an ICR that will require companies to provide extensive information instrumental for developing comprehensive regulations to reduce methane emissions from existing oil and gas sources.

The ICR process, which is governed by the Paperwork Reduction Act, provides the public two opportunities to review drafts of the ICR. The comment period on the first draft of the ICR closed August 2, 2016. EPA reviewed those comments and issued a second draft of the ICR that was available for public comment until October 31, 2016 while it was under review at OMB. After additional review and input, including from external stakeholders, the final ICR was issued to industry on November 10, 2016 after completing OMB review and receiving a valid OMB control number. Any future proposed or final rules regulating existing oil and gas sources would be developed after a review of the information received through this public process.

The Honorable Markwayne Mullin

1. Ms. McCabe, Office of Management and Budget (OMB) Circular A-4 guides Federal Agencies on the development of the Regulatory Impact Analysis that is required to accompany agency rules. Circular A-4 instructs agencies to include discount rates of 3 and 7 percent when evaluating the cost and benefits of its rules. This permits a comparison of the respective present values. However, both the Social Cost of Carbon estimates and the Social Cost of Methane estimates, fail to use the 7 percent discount rate. Is the failure to use the 7 percent discount rate in both the Social Cost of Carbon estimates and the Social Cost of Methane estimates because at that discount rate, the Social Cost of Carbon becomes negative? The Social Cost of Methane drops as well? For the Social Cost of Carbon a 7 percent discount rate actually reflects a benefit to the emission of carbon dioxide. Has the Agency ever run either the Social Cost of Carbon or Social Cost of Methane estimates using the proper discount rate of 7%?

Response: The choice of a discount rate, especially over long periods of time, raises difficult questions of science, economics, and law. Although it is well understood that the discount rate has a large influence on the current value of future damages, there is no consensus about what rates to use in this context. For rules with both intra- and intergenerational effects, agencies traditionally employ constant discount rates of both 3 percent and 7 percent in accordance with the Office of Management and Budget (OMB) Circular A-4. As Circular A-4 acknowledges, however, the choice of discount rate for intergenerational problems raises distinctive problems and presents considerable challenges.

In light of these challenges, the Interagency Working Group (IWG) led by OMB conducted an exhaustive review of the discount rate literature and calculated the estimates using three different discount rates: 2.5 percent, 3 percent, and 5 percent. In the “Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866” the IWG discusses extensively the rationale as to why it applied discount rates of 2.5 percent, 3 percent, and 5 percent in estimating the SCC (<https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf>). While the IWG has updated the estimates and issued several revisions, the methodology has not changed. The discounting framework discussed in 2010 applies to the current SC-CO₂ estimates and the recently published “Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide” (https://www.whitehouse.gov/sites/default/files/omb/inforeg/august_2016_sc_ch4_sc_n2o_addendum_final_8_26_16.pdf).

There is little support in the literature for using rates higher than 5 percent in an intergenerational context. Therefore, the IWG did not calculate the SC-CO₂ and the SC-CH₄ estimates using a 7 percent discount rate. The reasons for not including the 7 percent rate from Circular A-4 are further discussed in the IWG’s Response to Comments on the November 2013 Federal Register Notice (<https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-response-to-comments-final-july-2015.pdf>; pp 20-22).

2. **OMB Circular A-4 directs Federal Agencies to evaluate the costs and benefits that accrue to citizens and residents of the United States. While Circular A-4 specifies that an evaluation of global effects, when undertaken, is to be reported separately from domestic costs and benefits, your Agency in the final methane rule calculated only the global benefits from a reduction in methane emissions while ignoring domestic calculations for costs/benefits. Why did the Agency fail to provide such information to the citizens and residents of the United States? While your position may be that the global benefits of methane emissions reductions outweigh the domestic costs – the citizens and residents of the United States have no analysis upon which to make that determination?**

Response: As discussed at length in the RIA accompanying the final oil and gas rule as well as in the recent 2016 Addendum to the SC-CO₂ TSD (https://www.whitehouse.gov/sites/default/files/omb/inforeg/august_2016_sc_ch4_sc_n2o_addendum_final_8_26_16.pdf), the SC-CH₄ uses an analytical approach that follows the SC-CO₂ approach, including on the question of the scope of benefits to consider. The EPA, along with other members of the IWG, has determined that it is reasonable to use the same focus on global benefits for valuing emission reductions that was used to estimate the SC-CO₂. This is because anthropogenic climate change involves a global externality: emissions of most greenhouse gases (including CH₄) contribute to damages around the world even when they are emitted in the United States, and conversely, greenhouse gases emitted elsewhere contribute to damages in the United States. Consequently, to address the global nature of the problem, estimates of SC-CH₄ must incorporate the full (global) damages caused by emissions.

3. **In July 2015, the Office of Management & Budget, after being forced to put out the Social Cost of Carbon estimates for public comment, requested the National Academies of Science review the Social Cost of Carbon estimates. Shortly after the commencement of the NAS review, EPA, without appropriate peer-review and separate public notice and comment, utilized Social Cost of Methane estimates in justifying the costs and benefits of the September 2015 proposed and recently finalized rules addressing methane emissions from new oil and gas wells and operations. With the inherent problems associated with the Social Cost of Carbon estimates, as developed by an executive branch interagency working group, why would EPA move forward with the Social Cost of Methane estimates in such a unilateral fashion?**

Response: The SC-CH₄ was not used by EPA to determine the best system of emission reduction in the New Source Performance Standards for the oil and gas industry. For standard setting, which is separate and distinct from the RIA process, the EPA considered a number of factors consistent with the Agency's interpretation of Clean Air Act sections 111 (a)(1) and (b)(1)(B). These factors included the amount of the pollutant that is being emitted from the source category, the availability of technically feasible control options, and the costs of those control options.

The SC-CH₄ estimates allowed the EPA to account for the monetized climate benefits of the estimated methane reductions in the benefit-cost analysis presented in the RIA. As part of the

regulatory process, the EPA develops a RIA to assess the national impacts of rules that have costs or benefits that exceed \$100 million annually.

Furthermore, as discussed in the RIAs accompanying both the proposed and final oil and gas rules, the SC-CH₄ estimates were peer-reviewed and followed a well-established methodology. Specifically, these estimates underwent a standard double blind peer review process prior to journal publication. The EPA then sought additional external peer review of technical issues associated with its application to regulatory analysis.² Consistent with its standard rulemaking practice and commitment to transparency, rigorous analysis, and public involvement, the EPA also sought public comment on the valuation of non-CO₂ GHG impacts such as SC-N₂O and scientific review of the usage of the SC-CH₄ estimates throughout the process leading up to inclusion in the RIA accompanying the final oil and gas rule. Finally, we note that the IWG has reviewed the methodology and determined that these SC-CH₄ estimates offer an approach for improving analyses of regulatory actions with CH₄ emissions impacts in a manner consistent with the requirements of OMB's Information Quality Guidelines and OMB Circular A-4.

4. Did you reach out to OMB during your Agency's development of the Social Cost of Methane estimates to request a convening of an Interagency Working Group on the Social Cost of Methane?

Response: The IWG has reviewed the methodology and determined that these SC-CH₄ estimates offer an approach for improving analyses of regulatory actions with CH₄ emissions impacts in a manner consistent with the requirements of OMB's Information Quality Guidelines and OMB Circular A-4.

5. In the finalized rule for the oil and gas sector, the accompanying Regulatory Impact Analysis notes that quantification of benefits from reductions in hazardous air pollutants, ozone and particulate matter is not possible for the rule and therefore all the monetized benefits from the rule are attributable to the Social Cost of Methane estimates, does that mean without the EPA's Social Cost of Methane estimates the rule would result in only costs?

Response: No. The rule is expected to reduce 210,000 tons of VOCs and 3,900 tons of air toxics in 2025. These reductions are expected to yield benefits; however, the EPA was not able to place a monetary value on those emission reductions. Those benefits include reductions in health effects related to fine particle pollution, ozone, and air toxics, along with improvements in visibility. Ozone is linked to a variety of serious public health effects, including reduced lung function, asthma attacks, asthma development, emergency room visits and hospital admissions, and early death from respiratory and cardiovascular causes. Air toxics are known or suspected to cause cancer and other serious health effects. The consideration of non-monetized benefits is consistent with E.O. 12866, 13563, and OMB Circular A-4.

² This external peer review was added to the EPA Peer Review Agenda in November 2014. The public was invited to provide comment on the peer review plan, but EPA did not receive any comments.

The monetized benefits of \$690 million in 2025 (2012\$) outweigh estimated costs of \$530 million, and do not capture additional human health benefits expected from reductions in hazardous air pollutants, ozone, and particulate matter.

- 6. Ms. McCabe, it is my understanding that the same three integrated assessment models are used to measure the Social Cost of Carbon and the Social Cost of Methane. It is well understood that what goes into a model dictates what comes out of a model. Is it the case that EPA by choosing discount rates of 2.5%, 3.0% and 5.0% and ignoring the 7% discount as required by OMB guidance made an arbitrary decision so that the resulting estimates would be greater than the expected costs of greenhouse gas related regulations, including the Clean Power Plan and the recent NSPS for methane for the oil and gas sector?**

Response: No. As explained in the regulatory impact analysis developed for the final rule and in the 2010 SC-CO₂ Technical Support Document and in my answer to question 1, after a thorough review of the discounting literature, the IWG chose to use three discount rates to span a plausible range: 2.5, 3, and 5 percent per year.

- 7. Ms. McCabe, was the decision to ignore the Executive Branch's Office of Management and Budget Circular A-4 guidance in regard to the use of a 7% discount rate for the Social Cost of Methane estimates based on economics or policy?**

Response: As noted in my previous answers, the choice of a discount rate, especially over long periods of time, raises difficult questions of science, economics, and law. Although it is well understood that the discount rate has a large influence on the current value of future damages, there is no consensus about what rates to use in this context. For rules with both intra- and intergenerational effects, agencies traditionally employ constant discount rates of both 3 percent and 7 percent in accordance with OMB Circular A-4. As Circular A-4 acknowledges, however, the choice of discount rate for intergenerational problems raises distinctive problems and presents considerable challenges.

In light of these challenges, the IWG led by OMB conducted an exhaustive review of the discount rate literature and calculated the estimates using three different discount rates: 2.5 percent, 3 percent, and 5 percent. In the "Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866" the IWG discusses extensively the rationale as to why it applied discount rates of 2.5 percent, 3 percent, and 5 percent in estimating the SCC. (<https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf>). While the IWG has updated the estimates and issued several revisions, the methodology has not changed. The discounting framework discussed in 2010 applies to the current SC-CO₂ estimates and the recently published "Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide" (https://www.whitehouse.gov/sites/default/files/omb/inforeg/august_2016_sc_ch4_sc_n2o_addendum_final_8_26_16.pdf).

There is little support in the literature for using rates higher than 5 percent in an intergenerational context. Therefore, the IWG did not calculate the SC-CO₂ and the SC-CH₄ estimates using a 7 percent discount rate. The reasons for not including the 7 percent rate from Circular A-4 are further discussed in the IWG's Response to Comments on the November 2013 Federal Register Notice (<https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-response-to-comments-final-july-2015.pdf>; pp 20-22).

Attachment 2—Member Requests for the Record

During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are provided below.

The Honorable Joe Barton

1. **The EPA has issued 16 major rules affecting the U.S. Energy and Industrial sectors (appendix 2 of majority memorandum for July 6, 2016, Subcommittee on Energy and Power hearing). These include, among others, the Mercury and Air Toxics (MATS) Rule, Cross State Air Pollution Rule, air rules for the oil and gas industry issued in 2012 and 2016, Boiler MACT, Cement MACT, Brick MACT, the Ozone NAAQS, SO₂ NAAQS, and PM 2.5 NAAQS.**
 - A. Using the 2008 as the baseline, please identify how much each of these rules has improved relevant air quality measures in the United States?**
 - B. Please include the metrics the EPA uses to track the impact of each of these rules on air quality in the United States.**

Response: For over four decades, we have cut air pollution by 70 percent and the economy has more than tripled. Nationally, concentrations of the criteria air pollutants have dropped significantly between 1990 and 2015. For example, carbon monoxide is down 77 percent, lead is down 99 percent, ozone is down 22 percent, fine particles are down 37 percent, nitrogen dioxide is down 47 percent and sulfur dioxide is down 81 percent. In addition, from 1990 to 2011, emissions of air toxics declined by over 60 percent. These reductions are the result of implementing stationary and mobile source regulations.

Based on the EPA's most recent design value assessment where we compute statistics that relate directly to the NAAQS for each pollutant, here is a summary of how many nonattainment areas meet the NAAQS:

- For the 2008 8-hour ozone NAAQS, 26 of 46 original nonattainment areas meet the NAAQS based on 2013-2015 data.
- For the 2006 24-hour PM_{2.5} NAAQS, 24 of the 32 original nonattainment areas meet the NAAQS based on 2013-2015 data.
- For the 1997 annual PM_{2.5} NAAQS, 38 of the 39 original nonattainment areas meet the NAAQS based on 2013-2015 data.
- For the 2012 annual PM_{2.5} NAAQS, 2 of the 9 original nonattainment areas already meet the NAAQS based on 2013-2015 data.

Based on our most recent Air Quality Index assessment where we compute the total number of days reaching the *Unhealthy for Sensitive Groups* category or above in 35 of the largest cities in the U.S.:

- For ozone, the total number of days reaching the *Unhealthy for Sensitive Groups* category or above decreased 46 percent (from 1024 to 548).
- For PM2.5, the total number of days reaching the *Unhealthy for Sensitive Groups* category or above decreased 51 percent (from 282 to 139).

The Honorable Billy Long

1. Since 2009, the EPA has published approximately 3,900 final rules. Roughly, how many of these rules have been considered economically significant, meaning they have an annual effect on the economy of \$100 million or more?

Response: The EPA does not maintain a list of all regulations that have been deemed economically significant, a test that includes factors beyond just the \$100 million per year analysis.

The Honorable Robert Latta

1. In the “Clean Power Plan” for existing fossil fuel-fired electric generating units, EPA contends Section 111(d) of the Clean Air Act authorizes the agency to set standards that systematically compel a shift away from fossil fuels to generate electricity to renewable energy and efficiency programs.
 - A. Are any of the 70 source categories currently regulated under Section 111 of the Clean Air Act potentially subject to greenhouse gas regulation under Section 111(b) and/or Section 111(d) going forward?
 - B. Can you provide a list of emissions sources and industries regulated under Section 111 that would be exempt from greenhouse gas regulation under Section 111(b) or 111(d) going forward?

Response: The EPA’s approach has been to start with the highest emitting sectors. We have not made decisions about what other sectors might require regulation for their GHG emissions under Section 111.